

भारतीय गैर न्यायिक

भारत INDIA

रु. 500

FIVE HUNDRED
RUPEES

पाँच सौ रुपये

Rs. 500



INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

© 2022 ©

BW 994799

20 APR 2023

करारनामा / Agreement

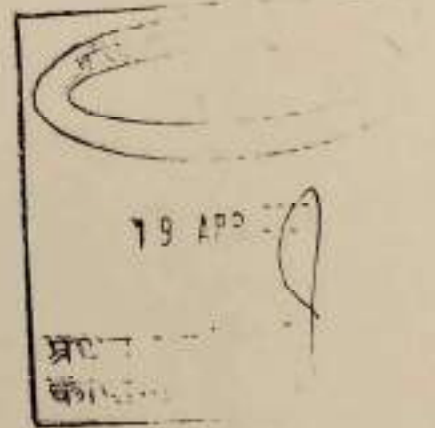
वकील दिलीप शिंदे
H1425

401 4977

प्रकाश

401072

401-24



MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING is made on this 21st APRIL, 2023 between YSI having its office at Manjari (Bk.), Tal. Haveli, Dist. Pune, Maharashtra, Pin: 412307 and GPS Renewables Pvt. Ltd., having its office at "2nd Floor, Prestige Pinnacle, 7th Block Kormangala, Bangalore 560034, India" which expression shall unless repugnant to the context or meaning thereof shall mean and include its successor and assigns.

Page 1 of 24

Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Sambhaji Kadupatil
Director General

This Memorandum of Understanding (MoU) defines the role and responsibilities of the participating agencies, monitoring and other matters related to the project entitled "**Process Development for an Economical & Sustainable Lignocellulosic Based Ethanol Production**".

Department of Alcohol Technology and Biofuels, VSI, Pune, aims to develop a cost effective process through either biological or combination of chemical/physicochemical-Biological pretreatment of lignocellulosic biomass for ethanol production. Also, optimized parameters for alkali pretreatment with bagasse developed at VSI will be taken into consideration as the control treatment with this study. Finally, an ethanol production process will be developed using an effective pretreatment wherein biological processes will be part of the process.

GPS Renewables Pvt. Ltd. is principally agreed and has given consent via email dated 09/02/2023 for initiation of project. The copy of email from **GPS Renewables Pvt. Ltd.** is attached herewith as **Annexure-I** and Project Proposal from VSI attached herewith as **Annexure II**

Responsibilities of GPS Renewables Pvt. Ltd.:

- GPS Renewables Pvt. Ltd. will provide funds to the extent of **Rs.138.39 Lakhs** as per the schedule II.
- GPS Renewables Pvt. Ltd. will provide biomass (rice straw and bamboo) from time to time for proper execution of the project.
- GPSR will procure microbial culture if necessary
- GPS Renewables Pvt. Ltd. will provide enzymes for saccharification of pretreated biomass time to time for proper execution of the project.
- GPS Renewables Pvt. Ltd. will provide all project related traveling (including air travel), lodging and boarding expenses of VSI staff, if occurred under the project.
- GPS Renewables Pvt. Ltd. will maintain confidentiality of the results obtained through project and intellectual property.
- GPS Renewables Pvt. Ltd. (and its subsidiaries) will be using the results for its own process development / scale up of process as a whole (physical pretreatment, Biological pretreatment, saccharification and fermentation) or in part with other known or newly developed processes.

Sambhaji Kadupatil
Principal
Vasantdada Sugar Institute
Manjari (Bk.) Tal. Haveli
Dist. Pune - 412307



Sambhaji Kadupatil
Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute
Manjari (Bk.) 412 307

Responsibilities of VSI:

- VSI will conduct all the experimental and analytical work in the proposed research project.
- VSI will procure microbial culture required for process development from Indian sources.
- Optimization of all the process parameters for production of ethanol will be conducted by VSI on flask and bench scale.
- VSI will provide analytical, microbiological, fermentation, distillation facilities available at the institute for conducting trials.
- VSI will provide material balance of the process developed through the project.
- VSI will prepare reports and presentations quarterly based on studies conducted.
- VSI will train GPS manpower on the developed process at their premises at a mutually acceptable schedule, duration and charges.

Duration of Project

- Duration of the project shall be 2.5 years from the date of release of the first installment by GPS Renewables Pvt. Ltd.
- Schedule of work has to be followed as defined in the table below in Schedule I


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Page 3 of 24





Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute
Manjari (Bk.) 412 307
Dist. Pune (India)

Schedule 1

Work Title	01	02	03	04	05	06	07	08	09	10
Collection of lignocellulosic biomass and its characterization	■									
Collection & screening of microbial strains for biological pretreatment	■	■								
Optimization of different parameters (Solid loading, stirring condition & time) for biological pretreatment			■	■	■					
Screening & optimization of different parameters (Solid loading, temperature, enzyme loading & time) for enzyme hydrolysis			■	■	■	■	■			
Comparison of chemical (SCB) & biological (Rice straw & bamboo) pretreatment using optimum parameters								■	■	
Characterization of undigested & hydrolyzed biomass (free biomass)				■	■	■	■	■	■	
Screening of microbes & fermentation of C5 & C6 sugars to ethanol separately & simultaneously								■		
Piloter scale study for ethanol production						■	■	■	■	
Characterization of Spent wash										■
Report preparation (Quarterly)										■

Rice straw	Bamboo	SCB	Report
------------	--------	-----	--------

Rights of Ownership/Technology Transfer and Utilization

- The know-how generated from the project will be the joint property of VSI, Pune and GPS Renewables Pvt. Ltd.
- VSI and GPS shall share the benefits from IPRs generated in following manner

S No.	Scenario	VSI % on IP Cost paid	GPS % on IP Cost paid
1	GPS and its subsidiaries owned projects, where GPS is doing the EPC	25	75
2	Projects Bagged by GPS where GPS is doing EPC	25	75
3	For projects bagged by VSI, GPS shall do the EPC (GPS shall have ROFR)	50	50
4	Projects bagged by VSI, where GPS has used ROFR (and not doing EPC), licensing IP for one project only to third party	75	25
	Technology License Contract Bagged by GPS for a third party where GPS is not doing EPC.	50	50



Sambhaji Kadupatil
Sambhaji Kadupatil
Director General

- IP Cost shall be limited to the technology fee component of any contract.
- Technology cost may vary on case to case basis based on the project size
- VSI shall provide continuous support to GPS for further technology development as per mutually agreed terms and conditions decided after completion of project.

It shall be the responsibility of VSI & GPS Renewables Pvt. Ltd. to take necessary action for protection of the intellectual property arising out of the project through proper instruments, such as, patents, copyrights, etc.

However, Periodic data sharing and review can be done as below

Monthly - Presentation by VSI and 1 pager brief Report.

Quarterly - Detailed Project progress report by VSI

- At the end of first year and completion of the work till selection of physio-bio pretreatment for further optimisation of the selected pretreatment, GPS and VSI will have a critical review meeting and decision on the next steps of the project will be taken either to continue in the same process, change philosophy or stop the project at this stage based on the experiment results against the expected output Or the results of experiment are not found suitable for commercial scale implementation.

Right to terminate the agreement

- Both the parties shall have the right to terminate the agreement with prior notice of one month if either of them fails to provide the services successfully as mentioned in the agreement, or violates any of the clause mentioned in the MOU, or ill use of the technology.
- Both parties shall have the right to terminate the agreement in case the Evaluation under the clause herein above does not reach an accord.

Dispute Settlement and Arbitration

- In case of any dispute or difference of opinion or interpretation of the MOU arising out of the activities performed under the provisions of this contract or related document not amicably resolved completely by mutual discussion or consultation between the parties within thirty days (30), the entire matter shall be referred to the Administrative Mechanism for Resolution for settlement of commercial disputes.
- Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism the party to this contract/agreement/MOU with mutual consent may take recourse of any

[Signature]
Principal
Vasantdada Sugar Institute
Manjeri (P.) Tal. Jalgaon
Dist. Purnea 471238



[Signature]
Sambhaji Kadupatli
Director General


alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure.

Jurisdiction

- Any dispute arising out of the implementation or interpretation of any provisions of this MOU shall be subject to the exclusive jurisdiction of Pune court.
- Force Majeure clause, neither party shall be held responsible for non-fulfilment of their respective obligations under the agreement due to the exigency of one or more of the unforeseen events such as but not limited to Acts of God, war, flood, earthquake, strike, lockouts, epidemics, riots, civil commotion etc. provided on the occurrence and cessation of any such events, the party affected thereby shall give a notice in writing to other party within one month of such occurrence or cessation. If the force-majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.
- This MoU shall take effect upon signing by both Parties and shall remain in effect for a period of two and half (2.5) years from that date unless earlier terminated. The MoU may be renewed at the end of this period by mutual written agreement by both the Parties.


Schedule II

Due Date	Amount in INR (Including GST)
1st Month of Signing	2767800
7th Month of Signing	2767800
13th Month of Signing	2767800
19th Month of Signing	2767800
Submission of Final report	2767800


Principal
Vasantdada Sugar Institute
Morgan (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Page 6 of 24





Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute

For GPS Renewal Pst. Ltd.

(Director)

Witness

1. S. S. Kherde Sankar Patil
2. A. Gore



For VSI

(Director General, VSI)

Witness

1. Dr. V. S. Kherde K. K. Kherde
2. S. C. Gupte K. K. Kherde



[Signature]
 Principal
 Vasantdada Sugar Institute
 Manjri (Bk.), Tal. Haveli,
 Dist. Pune - 412 307

PROJECT PROPOSAL
ON
PROCESS DEVELOPMENT FOR AN ECONOMICAL &
SUSTAINABLE LIGNOCELLULOSIC BASED ETHANOL
PRODUCTION

Submitted

To

GPS Renewables Pvt. Ltd.

No.30/2, Opp RKS Ready Mix Concrete
Hulimangala, Jigani Hobli, Anekal Taluk
Bengaluru – 560105, India

Submitted

By

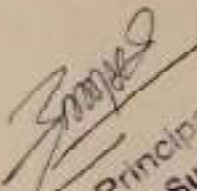


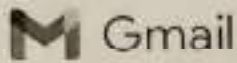
Department of Alcohol Technology & Biofuels

Vasantdada Sugar Institute, Manjari (Bk),

Pune- 412307

JANUARY-2023


Principal
Vasantdada Sugar Institute
Manjari (Bk.) Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Fwd: GPS renewables GST details.

Kakasaheb Konde <kakasaheb.konde@gmail.com>
To: **Shuvashish Behera** <behera.shuvashish@gmail.com>

Wed, Apr 26, 2023 at 9:55 AM

FYI

----- Forwarded message -----

From: **Gauri Nagnath Gund** <gaurinagnathgund@gpsrenewables.com>
Date: Tue, Apr 25, 2023 at 5:39 PM
Subject: GPS renewables GST details.
To: <kakasaheb.konde@gmail.com>
Cc: Sankalp Pathak <sankalp@gpsrenewables.com>


Hello,

Please find below GST and other details of the company-

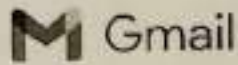
GPS RENEWABLES PRIVATE LIMITED

Address - Prestige Pinnacle, 2nd floor No. 113, 20th Main Road, 7th Block, Adugodi, Koramangala, Bangalore, Karnataka - 560034
PAN No: AAECG8238P
CIN No: U74900KA2012PTC064932
GST No: 29AAECG8238P1ZT.

Let me know any other details required,

Thanks & Regards,
Gauri.

Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Invitation: GPS<> VSI - Monthly Review - 1st @ Wed Jul 12, 2023 10:30am - 11:30am (IST) (behera.shuvashish@gmail.com)

sankalp@gpsrenewables.com <sankalp@gpsrenewables.com>

Mon, Jul 10, 2023 at 2:38 PM

Reply-To: sankalp@gpsrenewables.com

To: behera.shuvashish@gmail.com, gaurinagnathgund@gpsrenewables.com, drranade@gpsrenewables.com, janardangore@gpsrenewables.com, kakasaheb.konde@gmail.com

Join with Google Meet

Meeting link

meet.google.com/ttc-kxed-qrw

Join by phone

(US) +1 956-520-3447

PIN: 532783959

More phone numbers


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

When

Wednesday, Jul 12, 2023 - 10:30am - 11:30am (India Standard Time - Kolkata)

Location

Vasantdada Sugar Institute, GXGF+FRV Tal. Haveli, Manjari Rd, Vasantdada Sugar Institute Colony, Manjari Budruk, Pune, Maharashtra 412307, India

[View map](#)

Guests

sankalp@gpsrenewables.com - organizer

gaurinagnathgund@gpsrenewables.com

behera.shuvashish@gmail.com

drranade@gpsrenewables.com

janardangore@gpsrenewables.com

kakasaheb.konde@gmail.com

[View all guest info](#)


[Reply for behera.shuvashish@gmail.com](#)

Yes No Maybe More options

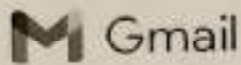
Invitation from Google Calendar

You are receiving this email because you are subscribed to calendar notifications. To stop receiving these emails, go to Calendar settings, select this calendar, and change "Other notifications".

Forwarding this invitation could allow any recipient to send a response to the organizer, be added to the guest list, invite others regardless of their own invitation status, or modify your RSVP. [Learn more](#)

 invite.ics
3K


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

MEETING - BM-2-Eth-VSI Research Project

Wed, Jul 5, 2023 at 4:28 PM

Sankalp Pathak <sankalp@gpsrenewables.com>

To: Kakasabes Konde <kakasabes.konde@gmail.com>, Gauri Nagnath Gund <gaurinagnathgund@gpsrenewables.com>
Cc: Dr Ranade <dranade@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>, Shuvashish Behera <behera.shuvashish@gmail.com>

Dear Sir,

Greetings from GPS Renewables.

Project Update from our side -

1. First installment paid - 29-06-2023
2. Sample delivery - Paddy straw - delivered on 28th June 2023
3. Sample delivery - Bamboo - delivered 4th July 2023

We would like to conduct the first monthly project review call as detailed below -

1. Proposed date and time - Friday 7th July 2023 - First Half
2. Team from GPS to join the call - @Dr Ranade @Janardan Gore @Gauri Nagnath Gund
3. Proposed Agenda -
 - a. Update on project hiring and if suitable introduction to project team
 - b. Plan of work for bamboo, paddy straw analysis
 - c. Update of culture availability for pre treatment
 - d. Any other incidental points from VSI / support required from GPS

Please let us know the suitability of the date and time proposed.

Thanking you and with regards,

Sankalp


VP Design and R&D,

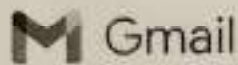
GPS Renewables, Bangalore, India

M.Sc. Microbiology - SU | PGDDS - IITB

LinkedIn profile | GPS Renewables website | Mobile: +91 8362725690

CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and contain confidential and/or privileged information and are legally protected from disclosure


Principal
Vasandada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Regarding VC meeting held on 12th July 2023

2 messages

Shuvashish Behera <behera.shuvashish@gmail.com>

Fri, Jul 14, 2023 at 4:17 PM

To: sankalp@gpsrenewables.com, janardangore@gpsrenewables.com

Cc: **Kakasaheb Konde** <kakasaheb.konde@gmail.com>, **Sangram Patil** <sangrampatil579@gmail.com>

Dear sir,

This is in reference to the VC meeting held on 12th July 2023 for monthly discussion on project entitled "Process development for an economical & Sustainable lignocellulosic based ethanol production".

The project report is attached herewith. We have coded 6 fungal cultures inside the report. Further communication in coming reports will be with the coded name.

Also, as per discussion, we need enzyme with following specifications:

Enzyme Name	Cellic CTec2
Make	Novozymes
Supplier	Sigma-Aldrich
Catalogue No. with available quantity	SAE0020-50 ML
Required quantity	50 ml x 2

Please feel free to contact us if you need any additional information.

Best Regards,

Dr. Kakasaheb Konde

Head, Professor & Technical Adviser


Department of Alcohol Technology & Biofuels

Vasantdada Sugar Institute

Manjari (Bk.), Pune 412307, India

Mobile: +918008376060


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

 2G PROGRESS REPORT_13 JULY 23.docx
190K

Fri, Jul 14, 2023 at 4:59 PM

Sankalp Pathak <sankalp@gpsrenewables.com>
To: Shuvashish Behera <behera.shuvashish@gmail.com>
Cc: janardangore@gpsrenewables.com, Kakasaheb Konde <kakasaheb.konde@gmail.com>, Sangram Patil <sangrampatil579@gmail.com>, Dr Ranade <dranade@gpsrenewables.com>, Gauri Nagnath Gund <gaurinagnathgund@gpsrenewables.com>, "Minutes @gps" <minutes@gpsrenewables.com>

Dear Sirs,


Acknowledging the receipt of the Monthly report.

With regards,

Sankalp
VP Design and R&D,
GPS Renewables, Bangalore, India
M.Sc. Microbiology - SU | PGDS - IITB
LinkedIn profile | GPS Renewables website | Mobile +91 8362725890

CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and contain confidential and/or privileged information and are legally protected from disclosure.

[Quoted text hidden]


Principal
Vasandada Sugar Institute
Manjari (Bk.), Tal. Haveni,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Regarding VC meeting held on 23rd August 2023

1 message

Shuvashish Behera <behera.shuvashish@gmail.com>

Wed, Aug 23, 2023 at 6:30 PM

To: sankalp@gpsrenewables.com, janardangore@gpsrenewables.com

Cc: Kakasaheb Konde <kakasaheb.konde@gmail.com>, Sangram Patil <sangrampatil579@gmail.com>

Dear sir,

This is in reference to the VC meeting held on 23rd August 2023 for monthly discussion on project entitled "Process development for an economical & Sustainable lignocellulosic based ethanol production".

The project report is attached herewith.

Please feel free to contact us if you need any additional information.

Best Regards,

Dr. Kakasaheb Konde

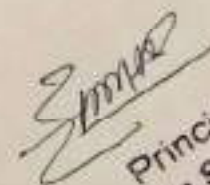
Head, Professor & Technical Adviser


Department of Alcohol Technology & Biofuels

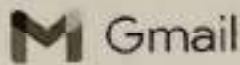
Vasantdada Sugar Institute

Manjari (Bk.), Pune 412307, India

Mobile: +918008376060


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli
Dist. Pune - 412 307

 **2G PROGRESS REPORT_23 Aug 2023_2.docx**
1403K



Shuvashish Behera <behera.shuvashish@gmail.com>

Fwd: ACTION - Monthly review meeting Sept 2023

3 messages

Kakasaheb Konde <kakasaheb.konde@gmail.com>
To: **Shuvashish Behera** <behera.shuvashish@gmail.com>

Wed, Sep 20, 2023 at 10:35 AM

----- Forwarded message -----

From: **Sankalp Pathak** <sankalp@gpsrenewables.com>

Date: Tue, Sep 19, 2023 at 5:24 PM

Subject: ACTION - Monthly review meeting Sept 2023

To: **Kakasaheb Konde** <kakasaheb.konde@gmail.com>

Cc: Dr Ranade <dranade@gpsrenewables.com>, Gomatam Ravi <gomatam.ravi@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>

Dear Sir,

Greetings for the day.

Can we schedule a monthly review call on Thursday 21st Sept 2023 at a suitable time?

Thanking you in advance and with regards,

Sankalp

Shuvashish Behera <behera.shuvashish@gmail.com>
To: sankalp@gpsrenewables.com, janardangore@gpsrenewables.com
Cc: **Kakasaheb Konde** <kakasaheb.konde@gmail.com>, **Sangram Patil** <sangrampatil579@gmail.com>

Wed, Sep 20, 2023 at 11:16 AM

Dear Sankalp,

We can fix the Monthly meeting between 2PM to 3PM on 21st Sept 2023.

Kindly acknowledge me regarding the suitability of the provided time for tomorrow's meeting.

Please feel free to contact us if you require any additional information.

Best Regards

Dr. K. S. Konde

Head, Professor & Technical Adviser

Dept. of Alcohol Technology & Biofuels,

Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli, Dist. Pune 412 307.

Mob. No: - 8008376060

E-mail: kakasaheb.konde@gmail.com

Ph. 020-26902100/348

[Quoted text hidden]

Sangram Patil
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Wed, Sep 20, 2023 at 11:17 AM

Sankalp Pathak <sankalp@gpsrenewables.com>
To: Shuvashish Behera <behera.shuvashish@gmail.com>
Cc: Kakasaheb Konde <kakasaheb.konde@gmail.com>, Sangram Patil <sangrampatil579@gmail.com>, janardangore@gpsrenewables.com

Hi,

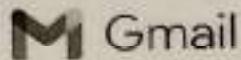
Please confirm the timing from our side.

With regards,

Sankalp
(Quoted text hidden)



Principal
Vasantdada Sugar Institute
Manjar (Rk.), Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

ACTION - Meeting on Fri 6th Oct 2023

Shuvashish Behera <behera.shuvashish@gmail.com>

Sat, Oct 7, 2023 at 10:40 AM

To: Sankalp Pathak <sankalp@gpsrenewables.com>

Cc: Kakasaheb Konde <kakasaheb.konde@gmail.com>, Dr Ranade <drranade@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>, Pratibha Baral <pratibhabaral@gpsrenewables.com>, Sangram Patil <sangrampatil579@gmail.com>

Dear Sankalp,

This is in reference to the VC meeting held on 6th Oct 2023 for monitoring progress of the project entitled "Process development for an economical & Sustainable lignocellulosic based ethanol production".

The project report is attached herewith.

Please feel free to contact us if you need any additional information.

Best Regards,

Dr. Kakasaheb Konde

Head, Professor & Technical Adviser


Department of Alcohol Technology & Biofuels


Vasantdada Sugar Institute

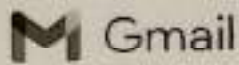
Manjari (Bk.), Pune 412307, India

Mobile: +918008376060

[Quoted text hidden]

 2G PROGRESS REPORT_7 Oct 2023.docx
323K


Principal
Vasantdada Sugar Institute
Manjari (Bk.) Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Invitation: Fortnight Review Call - VSI Bioethanol Project @ Tue Oct 31, 2023 11am - 12:30pm (IST) (behera.shuvashish@gmail.com)

Pratibha Baral <pratibhabaral@gpsrenewables.com>

Mon, Oct 30, 2023 at 11:04 AM

Reply-To: Pratibha Baral <pratibhabaral@gpsrenewables.com>

To: behera.shuvashish@gmail.com, Sankalp Pathak <sankalp@gpsrenewables.com>, Gauri Nagnath Gund <gaurinagnathgund@gpsrenewables.com>, Dr Ranade <dranade@gpsrenewables.com>, Soham Dillip Pore <sohampore@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>

Cc: Sreekrishna Sankar <sreekrishna@gpsrenewables.com>, Gomatam Ravi <gomatam.ravi@gpsrenewables.com>


Join with Google Meet

Meeting linkmeet.google.com/vnxs-pdqk-zsv**Join by phone**

(US) +1 402-282-0373

PIN: 153124652

More phone numbers



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

When

Tuesday Oct 31, 2023 11am - 12:30pm (India Standard Time - Kolkata)

Guests

Pratibha Baral - organizer

Sankalp Pathak

Gauri Nagnath Gund

behera.shuvashish@gmail.com

Dr Ranade

Soham Dillip Pore

Janardan Gore

Sreekrishna Sankar - optional

Gomatam Ravi - optional



View all guest info**Reply** for behera.shuvashish@gmail.com

Yes No Maybe More options

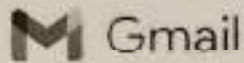
Invitation from Google Calendar

You are receiving this email because you are subscribed to calendar notifications. To stop receiving these emails, go to Calendar settings, select this calendar, and change "Other notifications".

Forwarding this invitation could allow any recipient to send a response to the organizer, be added to the guest list, invite others regardless of their own invitation status, or modify your RSVP. Learn more

 invite.ics
3K

Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Shuvashish Behera <behera.shuvashish@gmail.com>

Fifth report of project entitled "Process development for an economical & sustainable lignocellulosic based ethanol production"

Shuvashish Behera <behera.shuvashish@gmail.com>

Tue, Oct 31, 2023 at 6:07 PM

To: Sankalp Pathak <sankalp@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>, Dr Ranade <dranade@gpsrenewables.com>

Cc: Kakasaheb Konde <kakasaheb.konde@gmail.com>, Sangram Patil <sangrampatil579@gmail.com>

Dear Sankalp,

Please find attached herewith the 5th report project entitled "Process development for an economical & sustainable lignocellulosic based ethanol production".

Please feel free to contact us if you require any additional information.

Best Regards

Dr. K. S. Konde

Head, Professor & Technical Adviser

Dept. of Alcohol Technology & Biofuels,

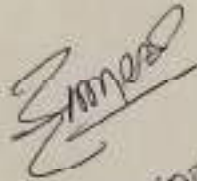
Vasantdada Sugar Institute

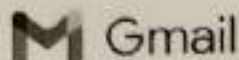
Manjari (Bk.), Tal. Haveli, Dist. Pune 412 307.

Mob. No: - 8008376060

E-mail: kakasaheb.konde@gmail.com

Ph. 020-26902100/348


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307 2G Progress Report_31 Oct 23.pdf
709K



Shuvashish Behera <behera.shuvashish@gmail.com>

Sixth report of project entitled "Process development for an economical & sustainable lignocellulosic based ethanol production"

Shuvashish Behera <behera.shuvashish@gmail.com>

Mon, Nov 20, 2023 at 7:08 PM

To: Sankalp Pathak <sankalp@gpsrenewables.com>, Janardan Gore <janardangore@gpsrenewables.com>, Dr Ranade <dranade@gpsrenewables.com>

Cc: Pratibha Baral <pratibhabaral@gpsrenewables.com>, Kakasaheb Konde <kakasaheb.konde@gmail.com>, Sangram Patil <sangrampatil579@gmail.com>

Dear Sankalp,

Please find attached herewith the 6th report project entitled "Process development for an economical & sustainable lignocellulosic based ethanol production".

Please feel free to contact us if you require any additional information.

Best Regards

Dr. K. S. Konde

Head, Professor & Technical Adviser

Dept. of Alcohol Technology & Biofuels,


Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli, Dist. Pune 412 307.


Mob. No: - 8008376060

E-mail: kakasaheb.konde@gmail.com

Ph. 020-26902100/348



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

 2G PROGRESS REPORT_20 Nov 2023.docx
86K

भारतीय गैर न्यायिक
भारत INDIA

रु. 500



FIVE HUNDRED
RUPEES

पाँच सौ रुपये

Rs. 500

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

2022

BU 220019

शुभ ०२६६८ १६/११/२२ ५००/-
 कर्ता का नाम
 पता
 निवासी
 पुराना विद्या प्रशासक सं.
 नाम
 इसका प्रकार का
 इसे जारी का
 मुद्रांक विद्या प्रशासक सं.
 सौ. ए. बी. शिंदे
 पता नं. २२०१९५३
 मुद्रांक विद्या प्रशासक सं.

02 June 2022

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) is made on this day, the **17/01/2023** between

Vasantdada Sugar Institute is an autonomous body, Registered society register under societies Registration Act 1860 and the Bombay Public Trust Act 1950. It has been set up to service the sugar industry in India in general and Maharashtra in particular.

Vasantdada Sugar Institute which expression shall unless repugnant to the context or meaning thereof shall mean and include its successors and assigns

[Signature]
 Principal
 Vasantdada Sugar Institute
 Marjari (Ek), Tal. Haveli
 Dist. Pune - 412 307

[Signature]

[Signature]

And

Raj Process Equipments and systems Pvt. Ltd. a process Equipments manufacturing company expertise is in providing turnkey plants for Distillery, Detergent, Starch & Starch Derivatives, Guar Gum, Zero Liquid Discharge Plant and one of the leaders in Dryers, Evaporators and Blenders having office at Jai Ganesh Vision, 'B' Wing, 3rd Floor, Jai Ganesh Fame Building, Akurdi, Pune - 411035, Maharashtra, India. Which expression shall unless repugnant to the context or meaning there of shall mean and include its successor and assigns


The MoU is signed for the purpose of **formulation of PDM (Polash derived Molasses) fertilizer in granular form using spent wash powder obtained from Bio Methanated spent Wash (BMSW) using spray dry technology** developed by Raj Process Equipments and systems Pvt. Ltd. BMSW Powder is rich in Potassium, and it is good potash source for soil. BMSW Powder is used as potash Fertilizer. However, the application of powder form is not convenient, so there is need to convert into granular form. This technology has been developed by VSI. In this connection Raj Process Equipments and systems Pvt. Ltd. approached VSI for implementation of this technology on collaboration basis and VSI also agreed to provide technical support in formulation of granular form of PDM fertilizer as per FCO norms for manufacturing unit /plant at factory site installed by Raj process equipments and systems Pvt. Ltd. Raj process equipments and systems Pvt. Ltd will be involved in this work as a partnering industry.

The above goals will be accomplished by undertaking the following responsibilities:

Responsibilities of Raj Process Equipments and systems Pvt. Ltd.

The partnering industry shall;

- a) Provide entire funding/costing for fabrication, design, installation, commissioning and operation of plant at suitable location.
- b) Raj Process Equipments and systems Pvt. Ltd shall pay 5% of plant and machinery + GST as royalty for per plant installed.
- c) Provide SOPs (standard operating procedure) for operation of PDM fertilizer plant.
- d) Raj Process Equipments and systems Pvt. Ltd will share all the details of equipment and machinery required for establishment of proposed plant.
- e) Raj process equipments should timely pay the royalty amount after successful completion of each Project work.
- f) Allow VSI officers to visit plant and suggest modification to be made in plant and machinery for achieving expected results


Principal
Vasanti Dada Sugar Institute
Marjari (Bk.), Tal. Hasegaon
Dist. Pune - 412 307





Responsibilities of VSI:

The VSI shall,

- a) Characterize Spentwash powder/raw material before granulation process.
- b) Design Formula to achieve desired product as per FCO standard specifications
- c) Characterized finished product (PDM Granular fertilizer)
- d) Develop and provide SOPs (standard operating procedure) for product formulation.
- e) Study of Pot/field experiment work for dose optimization.
- f) Prepare and provide guidelines for farmers regarding application of product.

Both the parties shall have the right to terminate the agreement with prior notice of one month if either of them fails to provide the services successfully as mentioned in the agreement, or violates any of the clause mentioned in the MOU, or ill use of the technology.

Dispute Settlement and Arbitration


In case of any dispute or difference of opinion or interpretation of the MOU arising out of the activities performed under the provisions of this contract or related document not amicably resolved completely by mutual discussion or consultation between the parties within thirty days (30), the entire matter shall be referred to the Administrative Mechanism for Resolution for settlement of commercial disputes.

Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism the party to this contract/agreement/MOU with mutual consent may take recourse of any alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure.

Jurisdiction

Any dispute arising out of the implementation or interpretation of any provisions of this MOU shall be subject to the exclusive jurisdiction of Pune court.

Force Majeure clause, neither party shall be held responsible for non-fulfilment of their respective obligations under the agreement due to the exigency of one or more of the unforeseen events such as but not limited to Acts of God, war, flood, earthquake, strike, lockouts, epidemics, riots, civil commotion etc. provided on the occurrence and cessation of any such events, the party affected thereby shall give a notice in writing to other party within one month of such occurrence or cessation. If the force-majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.


Principal
Vasari Udada Sugar Industries
Mangan (Bk.), Tal. Haveli
Dist. Pune - 412 307





This MoU shall take effect upon signing by both Parties and shall remain in effect for a period of **five (5) years** from that date unless earlier terminated. The MoU can be renewed at the end of this period by mutual written agreement by both the Parties.

For Raj Process Equipments and systems Pvt. Ltd

For VSI

(Managing Director)

Witness

1. _____

2. _____

(Director General, VSI)

Witness

1. _____

2. _____

Principal
Vasantdada Sugar Institute
Manjan (Bk.) Tal. Haveli
Dist. Pune - 412 307

From: ASHOK DOIPHODE [mailto:ashok.dolphode@raj-india.com]

Sent: 20 March 2023 17:43

To: 'Pranav Nikam' <nikampranav@yahoo.in>

Cc: 'Anil Pise' <anil@raj-india.com> 'kakasaheb.konde@gmail.com' <kakasaheb.konde@gmail.com>;

'mayur.kadam@raj-india.com' <mayur.kadam@raj-india.com>; 'rais.mulla@raj-india.com' <rais.mulla@raj-

india.com>; 'Avinash Deshmukh' <deshmukh.avinash38@gmail.com>; 'Pranav Nikam' <pp.nikam@vsiisugar.org.in>;

'Rohit Pise' (rohit.pise@raj-india.com) <rohit.pise@raj-india.com>; 'Umesh Makhare' (umesh.makhare@raj-

india.com) <umesh.makhare@raj-india.com>

Subject: RE: Potash Recovery Pilot Scale Plant (RP/22-106)

Dear Sir,

All work of pilot plant is completed & ready for water trial.

Kindly confirm the availability of feed, steam & other utility as per battery limit so that we will arrange our commissioning engineer at site to start the trial.

Thank & Regards,

Ashok Doiphode

Dy Manager-Projects

Mobile No : +91-9830001787



RAJ PROCESS EQUIPMENTS & SYSTEMS PVT. LTD.

Jai Ganesh Vision, 'B' Wing, 3rd Floor,

Jai Ganesh Fame Building,

Akardi, Pune - 411035, India

Tel: +91-20-40710010


Principal
Vasantdada Sugar Institute
Mangan (Bk), Tal. Haveli,
Dist Pune - 412 307



From: ASHOK DOIPHODE [mailto:ashok.doiphode@raj-india.com]
Sent: 23 February 2023 17:10
To: 'Pranav Nikam' <nikampranav@yahoo.in>
Cc: 'Anil Pise' <anil@raj-india.com>; 'kakasaheb.konde@gmail.com' <kakasaheb.konde@gmail.com>; 'mayur.kadam@raj-india.com' <mayur.kadam@raj-india.com>; 'rais.mulla@raj-india.com' <rais.mulla@raj-india.com>; 'Avinash Deshmukh' <deshmukh.avinash36@gmail.com>; 'Pranav Nikam' <pp.nikam@vsisugar.org.in>; 'Rohit Pise' (rohit.pise@raj-india.com) <rohit.pise@raj-india.com>; 'Umesh Makhare' (umesh.makhare@raj-india.com) <umesh.makhare@raj-india.com>
Subject: RE: Potash Recovery Pilot Scale Plant (RP/22-106)

Dear Sir,

Please find attached electrical load list of pilot scale evaporator & spray dryer plant for your further needful action.

Thank & Regards,

Ashok Doiphode



RAJ PROCESS EQUIPMENTS & SYSTEMS PVT. LTD.

Jai Ganesh Vision, 'B' Wing, 3rd Floor,
Jai Ganesh Fame Building,
Akurdi, Pune - 411035, India
Tel: +91-20-40710010
Telefax: +91-20-40710009
Website: www.rajprocessequipment.com


Principal
Vasantdada Sugar Institute
Mangan (Bk.), Tal. Haveli,
Dist. Pune - 412 307



From: ROHAN SHINDE [mailto:rohan.shinde@raj-india.com]
Sent: 14 December 2022 10:57
To: 'ASHOK DOIPHODE'
Cc: 'SANTOSH PAWAR'; 'aril@raj-india.com'; 'RAIS MULLA'; 'KIRAN KHARADE'; 'harish.patil@raj-india.com'; 'SHRADDHA TIPLE'; 'IMRAN SAYYAD'; 'mayur.kadam@raj-india.com'; 'Ashok Beloshe'; 'sunny.madas@raj-india.com'; 'Snehal Jarhav'
Subject: RE: RP/22/106 P&ID

Dear Sir,

Please find revised P&ID for Pre-treatment & Evaporation Section(RP/22/106)

Thanks & Regards,

Rohan Shinde.

From: ROHAN SHINDE [mailto:rohan.shinde@raj-india.com]
Sent: 21 October 2022 16:23
To: 'Sunny Madas'; 'Ashok Beloshe'; 'Snehal Jarhav'; 'ASHOK DOIPHODE'
Cc: 'SANTOSH PAWAR'; 'aril@raj-india.com'; 'RAIS MULLA'; 'KIRAN KHARADE'; 'harish.patil@raj-india.com'; 'SHRADDHA TIPLE'; 'IMRAN SAYYAD'; 'mayur.kadam@raj-india.com'
Subject: RP/22/106 P&ID

Dear Sir,

Please find RP/22/106 P&ID for further execution.

Thanks & Regards,

Rohan Shinde.

2 attachments

11/22/2023, 7:15 PM

Email - Fw: RP/22/106 P&ID

 P&ID FOR PRETREATMENT R2.pdf
182K

 RP-22-106 P&ID FOR DOUBLE EFFECT EVAPORATION PLANT R2.pdf
391K


Principal
Vasantdada Sugar Institute
Manjun (Bk.), Tal. Havelli,
Dist. Pune - 412 307



Phone No : 020-26902100/30
 Fax : 020-26902244
 Email : admin@vssisugar.org.in
 Web Site : www.vssisugar.com
 GSTIN : 27AAATV0865A1ZP



VASANTDADA SUGAR INSTITUTE
 Manjari (Bk.), Tal : Haveli, Dist : Pune - 412307,
 Maharashtra, India.

WORK ORDER

W.O.No VSI/PUR (AT-ABD-707) / 0453 /2022-2023

Date: 30/08/2022

Quot.No As per Negotiation meeting held on 06-08-2022

To,
Raj Process Equipments & Systems Pvt.Ltd.
 Jai Ganesh Vision B wing, 3rd floor, Akundi
 Pune- 411035

Contact Person :- Mr. Suraj Singh
 Phone:- 7908103986
 E-Mail:- sales@rajprocessequipment.com
 GSTIN : 27AACCR7924F1ZA
 PAN No: AACCR7924F

Dear Sir,
 Please supply the following services/items in accordance with the terms & conditions of this order.

Sr.No	Particulars	HSN/SAC Code	Qty Unit	Rate (Rs.)	Discount		Amount (Rs.)
					%	Amount (Rs.)	
1	Pilot Scale Evaporator Refer to Annexure I		1.00 Nos	1200000.00	0.00	0.00	1,200,000.00
2	Pilot Scale Spray Dryer Refer to Annexure II		1.00 Nos	1500000.00	0.00	0.00	1,500,000.00
3	Modification of Existing Pilot Plant Refer to Annexure III		1.00 Nos	250000.00	0.00	0.00	250,000.00
Rupees in Words : Rs. Twenty-Nine Lacs Fifty Thousand Only				Sub Total		0.00	2,950,000.00
Remark : 7 days of relocation of Pilot Scale at K.S.K. SSK Ltd., Kopergaon, Nagar at Free of cost, After 7 days Rs. 12,000/- per day basis for technical manpower including travelling, lodging & Boarding charges				Less : Discount			0.00
				Net Total			29,50,000.00

Terms & Conditions:

1. Work Completion Period : Within 30 Weeks
2. Payment : 90% within 15 days after completion of commissioning and 10% after warranty period
3. Taxes : GST Extra is applicable

WORK ORDER

The supplier agrees to provide the goods and the purchaser agrees to purchase the goods in accordance with the work order and these terms and conditions.

1. PRECEDENCE

If there is any ambiguity or inconsistency between the documents comprising the contract, the order of precedence in the event of the ambiguity or inconsistency shall be: An executed contract between the parties in relation to the purchase, the work order, and these work order terms and conditions.

2. AMENDMENTS

The parties agree that this order, including the terms and conditions on the face and reverse side hereof together with any documents attached hereto or incorporated herein by reference, contains the complete and final contract between purchaser and supplier. No agreement or understanding to modify the order shall be binding upon purchaser unless in writing by work order authorized representative.

3. CHANGES

The purchaser reserves the right at any time to make written changes in any one or more of the following: (a) place of delivery; (b) time or frequency of delivery; (c) manner of delivery.

4. WARRANTIES

(a) The supplier warrants that all goods supplied under this contract shall conform to the description in the work order and all applicable, specifications and standards and laws, be free of all liens and encumbrances, and as far as practicable, not impede or interfere with the operations on site or on the purchaser's premises (applicable to any installation or commissioning work required).

(b) The supplier warrants that for a period of 12 months from the date of acceptance or commissioning of the goods, whichever is later, the supplier will, on written notice from the purchaser and at its own cost, repair or replace any defective goods as to design, materials or workmanship. This is applicable for instruments, equipments and plant and machinery only.

(c) If the supplier does not rectify the defects within 15 days of receiving notice from the purchaser, the purchaser may carry out the repair or replacement on the supplier's behalf and the cost of such repair or replacement will be a debt due and payable on demand by the supplier to the purchaser.

5. NOVATION, ASSIGNMENT AND SUBCONTRACTING

(a) The supplier shall not novate, assign or transfer the Contract without the purchaser's prior written consent.

Chief Accountant & IC Purchase

Payment

Principal
 Vasantdada Sugar Institute
 Manjari (Bk.), Tal Haveli,
 Dist Pune - 412 307



17. INVOICES, PRICE AND PAYMENT

- a) All prices in the purchase order shall be fixed unless otherwise stated in the work order.
b) The supplier must send its invoice for the goods to the invoice address of the purchaser specified in the work order.
c) A valid tax invoice must be provided in respect of the goods and must show the purchase order number, description of the goods, the price, and any GST or duty component.
d) Unless otherwise stated in the purchase order, upon acceptance of the goods by the purchaser, payment for the goods shall be made within 30 days from the date of supply or stated in PO to which a correctly rendered invoice is issued to the purchaser. Payment for the goods does not imply acceptance of the goods by the purchaser.

18. LAWS AND REGULATIONS

- a) The supplier must, at its own cost, obtain all approvals in performance of this Contract and comply with all legislative requirements in relation to the goods.

19. TRANSPORT, DELIVERY & PACKAGING

- a) All goods must be packed, clearly marked and transported in accordance with the purchase order or, if not specified in the work order, in accordance with industry best practices.

20. TITLE AND RISK

- a) Risk in the goods passes from the supplier to the purchaser when the goods are delivered to the purchaser at the delivery address or, if applicable, on completion of installation.
b) Title in the goods passes from the supplier to the purchaser on the earlier of payment of the price or the delivery of the goods to the purchaser at the delivery address or, if applicable, on completion of installation.

21. QUANTITY

- a) The purchaser shall only be liable for payment to the supplier for the quantity of goods described in the purchase order.

22. INSPECTION AND TESTING

- a) If, in the purchaser's system, the goods are not supplied in accordance with the work order and to the standard, quality and finish required by the purchaser then the supplier must, upon receiving notice from the purchaser, replace, correct or have workmanship performed on the goods at its cost to the purchaser within working 15 days of the date of the notice.

23. INDEMNITY

- a) The supplier is liable for and shall indemnify and keep indemnified the purchaser and its officers, employees, agents and contractors against all loss in respect of all property, and injury or death of all persons and otherwise. This indemnity is reduced proportionately to the extent to which the loss is caused or contributed to by the purchaser.

24. INSURANCE

- a) Where the supply of the goods includes installation and/or on-site management, the supplier shall effect and maintain, at its own expense, the Workers Compensation insurance for an amount not less than the statutory amount to cover all claims or liabilities for any accident or injury. This insurance shall include an indemnity extension and waiver of subrogation in favour of the purchaser.

- b) Workers Compensation insurance for an amount not less than the statutory amount to cover all claims or liabilities for any accident or injury. This insurance shall include an indemnity extension and waiver of subrogation in favour of the purchaser.

25. CANCELLATION

- a) The purchaser may cancel a work order at any time by giving the supplier 7 days' written notice. If the Contract covers standard stock goods, the purchaser's liability will be to pay for goods shipped prior to the cancellation. If the Contract covers goods manufactured to the purchaser's specification or specification prepared by the supplier for the purchaser, upon receipt of notice of cancellation, the supplier shall cease manufacture, supply or work in accordance with the notice and shall immediately do everything possible to mitigate any costs incurred from such cancellation. Provided the supplier is not in default under this Contract, the purchaser will pay the supplier the costs incurred prior to cancellation, the purchase order value of the goods manufactured and/or supplied at the date of the cancellation and cost of materials for which the supplier is legally bound to pay. Upon such payment, title to and property in the goods and ordered materials shall pass to the Purchaser.

- b) Delays in case of delay in supply of ordered goods/materials, the liquidated damages @ 0.1% on the cost of work-in-hand materials shall be charged per week.

26. NOTICES

- a) Any notices must be in writing and hand delivered, sent by prepaid post, by facsimile or e-mailed to the recipient's address for notices set out in the work order.

Copy to :

Purchase Sanction File/ Purchase order File/ Indemnity/Payment file

End




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Tax Invoice (ORIGINAL FOR RECIPIENT) e-Invoice



IRN : 47c87827b6bca61c4efbd7d12018794bd18579baca65-
c2f56f81f3236b022bc
Ack No. : 122315622903772
Ack Date : 5-Feb-23

 RAJ PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD. (UNIT-B) GAT NO.371, KHARABANDI CHIKANPLAE-410501 H/O Add: 24 9829088 P/RG SC/UR/ABD TSE-FICE GSTIN/UIN: 27AACCR7924F1ZA State Name: Maharashtra, Code: 27 CIN: U29299PN2003PTC017672 E-Mail: sales@rajprocessequipment.com	Invoice No.	e-Way Bill No.	Dated
	CH-0503	2415 483 4218	5-Feb-23
	Delivery Note	Mode/Terms of Payment	
	Reference No. & Date	Other References	
	CH-0503 dt. 5-Feb-23		
Consignee (Ship to)	Buyer's Order No.	Dated	
Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307. GSTIN/UIN : 27AAATV0865A1ZP	IS/PUR (AT-450-187)0403022-2023	30-Aug-22	
Buyer (Bill to)	Dispatch Doc No.	Delivery Note Date	
Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307. GSTIN/UIN : 27AAATV0865A1ZP State Name : Maharashtra, Code : 27	CH-0503		
	Dispatched through	Destination	
	By Road	Pune	
	Bill of Lading/LR-RR No.	Motor Vehicle No.	
	46756 dt. 5-Feb-23	NL 01 N 3034	
	Terms of Delivery		

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	Pilot Scale Evaporator (RR22-106) AS PER ANNEXURE	84194020	1.00 LOT	12,00,000.00	LOT	12,00,000.00
						1,08,000.00
						1,08,000.00
	OUTPUT CGST 9%					
	OUTPUT SGST 9%					
	Total		1.00 LOT			Rs. 14,16,000.00

Amount Chargeable (in words) E. & O.E
Indian Rupees Fourteen Lakh Sixteen Thousand Only

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
84194020	12,00,000.00	9%	1,08,000.00	9%	1,08,000.00	2,16,000.00
	Total		1,08,000.00		1,08,000.00	2,16,000.00

Tax Amount (in words) : **Indian Rupees Two Lakh Sixteen Thousand Only**
 Company's PAN : AACCR7924F
 Declaration: We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.
 for RAJ PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD.

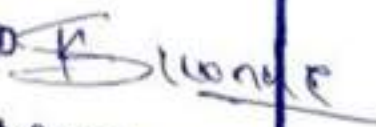
 Authorized Signatory

This is a Computer Generated Invoice
 Main Gate Vasantdada VSI Office
 Vasantdada Sugar Institute, Manjari (Bk)
 Dist. Pune-412307
 Date 08/02/2023
 Invoice No. 122315622903772
 Amount Rs. 14,16,000/-
 In words: Fourteen Lakh Sixteen Thousand Only
 Signature:



Principal
Vasantdada Sugar Institute
 Manjari (Bk), Tal. Haveli,
 Dist. Pune - 412 307

Certified that **Goods/ Materials** ordered has been received in good condition & confirming to the specification. The Same has been accounted for in:

Stock Register No. : Fitted Asset RSD-2
On Page No. : 80 Noted
Date : 31/05/2023 Thrusse
Signature Indenting HOD: 
Name of the Department - Alcohol Tech (Biofuel)




Principal
Vasantdada Sugar Institute
Manjari (B), Tal. Haveli,
Dist. Pune - 412 307

Tax Invoice

(ORIGINAL FOR RECIPIENT)

e-Invoice

IRN : 347082aaa13e923752cd0b997e46cb0a291e074ea1-11742a994af308bcbab0
 Ack No. : 122315500936407
 Ack Date : 24-Jan-23



 RAJ PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD. UNIT-1, SAKI NO.23, KARANWADI, ORAWA, PUNE-412001 IC Nos. AGRHNDX FTRG 3013X 46019X 402 GSTIN/UIN : 27AACCR7924F1ZA State Name : Maharashtra, Code : 27 CIN : U29299PN2003PTC017672 E-Mail : sales@rajprocessequipment.com	Invoice No. : CH-0477 e-Way Bill No. : 29113891888 Dated : 24-Jan-23
	Delivery Note : Reference No. & Date : Other References : Buyer's Order No. : Dated : Dispatch Doc No. : Delivery Note Date : Dispatched through : Destination : By Road : Motor Vehicle No. : Terms of Delivery :
Consignee (Ship to) Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307, GSTIN/UIN : 27AAATV0865A1ZP State Name : Maharashtra, Code : 27	Buyer (Bill to) Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307, GSTIN/UIN : 27AAATV0865A1ZP State Name : Maharashtra, Code : 27

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	Pilot Scale Spray Dryer (99122-010) AS PER ANNEXURE	84193900	1.00 LOT	15,00,000.00	LOT	15,00,000.00
						1,35,000.00
						1,35,000.00
						OUTPUT CGST 9%
						OUTPUT SGST 9%
Total			1.00 LOT			Rs. 17,70,000.00

E & O/E

Amount Chargeable (in words)						
Indian Rupees Seventeen Lakh Seventy Thousand Only						
HSN/SAC	Taxable Value	Central Tax Rate	Central Tax Amount	State Tax Rate	State Tax Amount	Total Tax Amount
84193900	15,00,000.00	9%	1,35,000.00	9%	1,35,000.00	2,70,000.00
	Total		1,35,000.00		1,35,000.00	2,70,000.00

Tax Amount (in words) : **Indian Rupees Two Lakh Seventy Thousand Only**
 Company's PAN : **AACCR7924F**

Declaration
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for RAJ PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD.


This is a Computer Generated Invoice




Principal
Vasantdada Sugar Institute
 Manjari (Bk), Tal. Haveli,
 Dist. Pune - 412 307

Vasantdada Sugar Institute VSI/H/11/11/2023
Vasantdada Sugar Institute, Manjari (B)
Date: 25/01/2023 Page: 2/10
No. of Lot: 2138 No. of Case: 9
C. No.: 03/00/11/11/11/11
Signature: [Signature]

Certified that Goods/ Materials ordered has been received in good condition & confirming to the specification. The same has been accounted for in:

Stock Register : Filled Page
On Page No. : 81
Date : 25/01/2023
Signature Indenting HOD : [Signature]
Name of the Department : (Karn) Tech. Dept. (Karn)

ESD-2
Noted
Karn



[Signature]
Principal
Vasantdada Sugar Institute
Manjari (B), Tal. Haveli,
Dist. Pune - 412 307

Tax Invoice

(ORIGINAL FOR RECEIPT)

e-Invoice

IRIN : 82813b784eb54a1672d5540829994f6c2e6df82d21e-
4c41a24bc09d9152e124
Ack No : 122119422995488
Ack Date : 5-Feb-23



 RAI PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD. UNIT 4, OFFICE 30, KANHARAO DONGAR PUNE-411011 K. K. ROAD, 3RD FLOOR, 2ND CROSS ROAD #102 GSTIN/UIN : 27AAACR7924F12A State Name : Maharashtra, Code : 27 CIN : U29299PN2003PTCO017872 E-Mail : sales@raiprocessequipment.com	Invoice No. LC-0024 Delivery Note	Dated 5-Feb-23 Mode/Terms of Payment
	Reference No. & Date. LC-0024 dt. 5-Feb-23 Buyer's Order No. 199/J48/C/403020	Other References LC-0024 Date 30-Aug-22
Consignee (Ship to) Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307, GSTIN/UIN : 27AAATV0865A1ZP State Name : Maharashtra, Code : 27	Buyer (Bill to) Vasantdada Sugar Institute Manjari (Bk), Tal. Haveli, Dist. Pune-412307, GSTIN/UIN : 27AAATV0865A1ZP State Name : Maharashtra, Code : 27	Terms of Delivery BY ROAD

Sl. No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	Labour Charges Withholding of every Part Part RPN23-106	895442	1.00 nos	2,50,000.00	nos	2,50,000.00
	OUTPUT CGST 9%					22,500.00
	OUTPUT SGST 9%					22,500.00
Total						Rs. 2,95,000.00

Amount Chargeable in words
Indian Rupees Two Lakh Ninety Five Thousand Only

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
895442	2,50,000.00	9%	22,500.00	9%	22,500.00	45,000.00
Total			22,500.00		22,500.00	45,000.00

Tax Amount (in words) : **Indian Rupees Forty Five Thousand Only**
 Company's PAN : **AACCR7924F**

Declaration
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for RAI PROCESS EQUIPMENTS AND SYSTEMS PVT.LTD.

 Authorized Signatory


This is a Computer Generated Invoice

महाराष्ट्र शासन
 राजपत्र क्र. 2236
 दि. 22/02/2023




Principal
Vasantdada Sugar Institute
 Manjari (Bk), Tal. Haveli,
 Dist. Pune - 412 307

Certified that GoodS/ Materials ordered has been received in good condition & confirming to the specification. The Same has been accounted for in:

Stock Register : Fixed Asset RSD-2
On Page No. : 82 Noted
Date : 31/5/2023
Signature Indenting MOD 
Name of the Department - Alcohol Team & Bioferal




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Note submitted to Accounts Department, VSI

Date: 30-05-2022

Subject: Release of payment to Raj Process Equipments & Systems Pvt. Ltd.

Dear Sir,

This has reference to the work order no. VSI/PUR (AT-ABD-707)0453/2022-2023 for Supply, Erection and Commissioning of Pilot Scale Evaporator & Deyer along with modifications in existing plant.

The installation of pilot plant is completed and commissioning is in process. Therefore, you are requested to release the 80% of the total amount as soon as possible.

Thanking you,



(Dr. K. S. Konde)

Head, Professor & Technical Adviser
Department of Alcohol Technology & Biofuels

Encl:

1. Work order of Raj process equipment

To Smt
23/05/22



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

----- Forwarded message -----

From: Vaibhav Thwari <Vaibhav.Thwari@praj.net>
Date: Tue, Jan 3, 2023 at 1:20 PM
Subject: RE: Minutes of Meeting between Praj and VSI dated 09h Dec'22
To: Sakasahab Jonde <gsak@gsak.com> <Sakasahab.Jonde@gmail.com>
Cc: Abhijit Muley <Abhijit.Muley@praj.net>, Basavaraj C <Basavaraj.C@praj.net>

Dear Sir

Happy new year,

Further to mail below regarding validation trials for PM-Stab, please find attached herewith the document describing the scope of work.

We wish to get the performance of our technology validated from you and request you to send your quotation for the same.

There will be total 10-12 samples where attached scope will be same for each sample. We will get the samples to your laboratory after treatment.

In case of any further query, you may contact undersign or Mr. Basavaraj (Mb. No. : 9600600179).

Look forward to get details from you soon.

Thanks and Regards,

Vaibhav Thwari

Sr. General Manager - Proposals



Praj Industries Limited.

Praj Tower, 274 & 275, Bhumkar Chowk-Hinjewadi Road,

Hinjewadi, Pune-411057

Tel: +91-20-22941000/71802000

Cell no: +919970000482

www.praj.net


Principal
Vasantdada Sugar Institute
Manori (Bk.), Tal. Haveli,
Dist. Pune - 412 307



ANNEX 1

Objective : Validation of Praj's PM Stab Technology by Comparing PM Stab Treated Press Mud with untreated Press Mud for preservation of TCVS (Organic Matter) over 12 month period.

1. Praj's team shall treat the sugar cane press mud with PM-Stab as per standard procedure with VSI representative as witness during sample collection.
2. At the same time, samples of sugar cane press mud without PM stab application will also be collected.
3. The PM-Stab treated & untreated press mud shall be packed in airtight HDPE bags. These bags shall be packed in HDPE drums and delivered to VSI, Pune for preservation study and analysis.
4. The quantity in each such packed drum will be about 20-30Kg per drum and we expect sample for 2 or 3 Sugar mills to be collected. Around 30-40 samples in total.
5. The preservation and analysis study is to be carried out for a period of 12 months with monthly reports to be jointly analysed.
6. The treated drums are to be stored in ambient conditions - preferably in a shade and away from direct sunlight and the untreated press-mud will be stored as open to atmosphere as per sugar industry practise.
7. Sample of First PM Stab treated drum to be analysed at end of each month and the same to be compared with the untreated sample for the following parameters.

Sr. no.	Analysis Parameters	Unit of Measurement
1	pH	---
2	Total solids	% w/w
3	Ash	% w/w
4	Total volatile solids	% w/w
5	Total volatile acids	PPM
6	Total carbohydrate	% w/w
7	Lignin	% w/w

The results of this comparison will be jointly verified by Praj & VSI team


Principal
Vasantdada Sugar Institute
Munyon (Bk), Tal. Haveli,
Dist. Pune - 412 307



Fwd: Minutes of Meeting between Praj and VSI dated 9th Dec'22

Kakasaheb Konde <kakasaheb.konde@gmail.com>

Mon, Dec 13, 2022 at 2:05 PM

To: Shuvashish Behara <shuvashishbehara@gmail.com>, Rajgunnati Bhasra <rajgunnati.bhasra@gmail.com>, Pranav Nileam <nileampranav@yahoo.in>

----- Forwarded message -----

From: **Valbhav Tiwari** <Valbhav.Tiwari@praj.net>
Date: Thu, Dec 15, 2022 at 12:02 PM
Subject: RE: Minutes of Meeting between Praj and VSI dated 9th Dec'22
To: kakasaheb.konde@gmail.com <kakasaheb.konde@gmail.com>
Cc: Akshay Kulkarni <akshay@praj.net>, Basavaraj C <basavaraj.C@praj.net>

Dear Sir,

Once again thank you for your visit and detailed interaction.

Further as discussed, please find herewith the Draft of NDA. If found OK, please fill in the details required from your side and send me back. I will get it printed, signed from our side and send it for your signature.

In case of comments, please let me know.

For further work, we can sign individual MOU's to take the action forward.

For now we would like to start the work of validation for our PM-Sub product. This will be very much similar to what we did in case of Bio-Synap.

Set our Mr. Basavaraj-Product Manager (D&C) will send you data (scope of work).

While we are discussing the NDA, you can go through the scope and let us know your comments and quotation for the same so that immediately after signing of NDA we can start the work.

Hope this is in line with our discussion.

Looking forward to get associated with you.

Thanks and Regards,

Valbhav Tiwari

Sr. General Manager - Proposals



Praj Industries Limited.

Praj Tower, 274 & 275, Shunkar Chowk-Hinjewadi Road,

Hinjewadi, Pune-411057

Tel: +91-20-22941000/71802000

Cell no: +919970000482

www.praj.net


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



From: Sudarshan Kendre

Sent: 13 December 2022 09:15

To: kakasahet.konde@gmail.com; skadupati@gmail.com

Cc: [Uday Kulkarni](#); [Vishay Tiwari](#); [Abul Mulya](#); [Pranod Kumbhar](#)

Subject: Minutes of Meeting between Praj and VSI dated 8th Dec'22

Dear Sir,

Greetings from Praj Industries!!

We would like to take the opportunity to thank you for your time to visit our R&D (Mahra) Facility and go through our work on future products and current developments.

As discussed, both the organizations are working towards benefit of end users and collaboration on certain topics will take the this to next level.

Please find attached herewith the MOM of our meeting for your reference.

We would like to take this agenda forward from here onwards along with you and from our side, Mr. [Vishay Tiwari](#) will be co-ordinating to take it ahead.

Look forward to your continue support in our future technologies and products.

Thanks and Regards,

Sudarshan Kendre
(General Manager
Business Development)

Praj Industries Limited,
Praj Tower, 274 & 275, Bunkar Chowk Hirjewadi Road,
Hirjewadi, Pune-411057
Tel: +91-20-22941000/71802000
Cell no: +91-9890900181


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



MUTUAL NON-DISCLOSURE AGREEMENT

A. Details of the Parties:

PRAJ: Praj Industries Limited (CIN: L27101PN1985PLC038031) A company incorporated under the laws of India and having its Registered office at "Praj Tower", 274 & 275/2, Bhumkar Chowk-Hinjewadi Road, Hinjewadi, Pune 411057 India (hereinafter referred to as "PRAJ", which expression unless repugnant to the context shall mean and include its successors and assigns) Attention: Mr. Atul Mulay	Company: Vasantdada Sugar Institute Nature of Entity: Public Charitable Trust (PAN: AAATV0865A) Incorporated under the laws of The Societies Registration Act, 1860 & The Bombay Public Trust Act, 1950, having its Registered office at Manjari (Bk), Tal Haveli, Dist: Pune-412307, Maharashtra, India (hereinafter referred to as "Company", which expression unless repugnant to the context shall mean and include its successors and assigns) Attention: Mr. Sambhaji Kadupatil
---	---

B. Description of the Samples: (Parties to fill-up details if applicable)

PRAJ: NA	Company: NA
----------	-------------

C. Description of the Purpose:

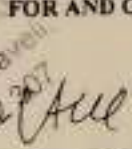

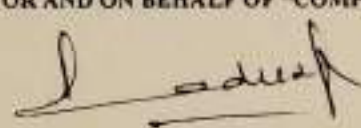
The Purposes of this Agreement is/are to:

- For validation of the technology/products developed by either of the parties
- For working on development of technologies/Products jointly agreed between both the parties in the area of Bio-Energy and Bio-Chemicals mainly comprising of 1st generation Ethanol, 2nd generation Ethanol, Biomass to CBG, Isobutanol, Bio-Hydrogen, Sustainable aviation fuel, Lactic acid, Poly lactic acid etc.

D. Effective Date:	16-Jan-23
E. Term:	Two (2) years from the Effective Date.
F. Confidentiality Period:	Five (5) years post expiry or termination of this Agreement.
G. Governing Law & Jurisdiction:	Governing Law: India and Jurisdiction: Courts in Pune, India
H. Arbitration Institution, Rules & Seat of Arbitration	Arbitration Rules: Arbitration & Conciliation Act, 1996 Seat of Arbitration : Pune, India
I. Other Clauses :	Click here to enter text.

Standard Terms and Conditions having reference no. (PIL/BNDA/STC/2022) shall be an integral part of this Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorised representatives as of the date written below.

<p style="text-align: center;">FOR AND ON BEHALF OF "PRAJ"</p>   <p>Name: Mr. Atul Mulay Title: President-Bioenergy Date: 16-01-2023</p>	<p style="text-align: center;">FOR AND ON BEHALF OF "COMPANY"</p>  <p>Name: Mr. Sambhaji Kadupatil Title: Director General Date: 16-01-2023</p>
--	---

Standard Terms and Conditions
(PIL/INDIA/STC 2022)

1. Definitions:

- 1.1 "Confidential Information" means any and all information transmitted by the Disclosing Party to the Receiving Party in any form either written or oral or visual inspection. The Confidential Information shall without limitation include all information, sample, specifications, standards, drawings, designs (whether registered or otherwise), know-how, processes, proprietary knowledge, patents, patent applications, copyright, copyright applications, trade secrets, details of specifications, drawings, financial information, information relating to procurement requirements, purchasing, manufacturing, customer lists, product plans, product ideas, business strategies, marketing or business plans, financial or personnel matters, investors, employees, business and contractual relationships, business forecasts, sales and merchandising, and information regarding third parties, suppliers, customers, employees, investors or facilities, and all such information and data which is available and held by the Disclosing Party on trust or as a licensee
- 1.2 "Disclosing Party" shall mean either Proj or Company who is disclosing Confidential Information under this Agreement to Receiving Party.
- 1.3 "Receiving Party" shall mean either Proj or Company who is receiving Confidential Information under this Agreement from Disclosing Party.

2. Exceptions to Confidential Information:

However, the following shall not be considered Confidential Information - (i) information which is in the public domain other than by the Receiving Party's breach of the terms of this Agreement, (ii) information which was previously known to the Receiving Party prior to receipt from Disclosing Party, (iii) information which was lawfully obtained by the Receiving Party from a third party not having any confidentiality obligations with Disclosing Party, (iv) information independently developed by Receiving Party without using Disclosing Party's Confidential Information, and (v) information which Receiving Party is required to disclose subject to applicable law, regulation or judicial / administrative order, only after Disclosing Party has been given prompt notice and sufficient opportunity to seek confidential treatment of such disclosure

3. Obligation of Confidentiality and Non-Use:

Unless Disclosing Party specifically authorizes in writing, Receiving Party must

- (a) not take any copy, extract, abstract or record or use Disclosing Party's Confidential Information and Samples, except for the Purpose,
- (b) The Receiving Party agrees not to disclose the Confidential Information to third parties except its employees, officers and directors who are required to be informed for the implementation of the Purpose and who are bound to the Receiving Party for preserving the confidentiality and secrecy covenants. The Receiving Party shall be liable for the unauthorized disclosure of the Confidential Information by its employees, officers and directors
- (c) not file any patent, utility model, or design application based upon any of Disclosing Party's Confidential Information

4. Ownership of Confidential Information:

Nothing contained in this Agreement shall be construed as granting or confirming any rights of ownership of the Confidential Information or any rights by license or otherwise expressly, implied or otherwise, for an invention, discovery or improvement hereafter made, conceived or acquired or for any invention, discovery or improvement made, conceived or acquired prior to the date of this Agreement. The Receiving Party agrees that the Confidential Information shall be released at the sole discretion of Disclosing Party and this Agreement shall not make it mandatory for Disclosing Party to release any information required by the Receiving Party. Confidential Information provided under this Agreement is provided "AS IS" basis. The Disclosing Party has no liability arising from Receiving Party's use of the Confidential Information

5. Term & Termination:

This Agreement shall be valid for a period of Term commencing from the Effective Date during which the Parties shall disclose the Confidential Information. Either Party shall be entitled to terminate this

Agreement by issuing a prior written notice of thirty (30) days to the Other Party. If it is clearly understood by the Parties that the covenants of secrecy and non-use shall survive for a period of Confidentiality Period of this Agreement

6. Return of Confidential Information:

On the Confidential Information not being required by the Receiving Party or on the expiry or termination of this Agreement or upon the request of Disclosing Party, the Receiving Party shall forthwith return to Disclosing Party or destroy, the Confidential Information within 10 days from the date of request or expiry or termination of this Agreement

7. Remedies:

Receiving Party acknowledges and agrees that in the event of any breach of the terms of this Agreement, Disclosing Party shall be irreparably and immediately harmed and shall not be adequately compensated by monetary damages. Therefore, in addition to any other remedy to which it may be entitled in law or equity, Disclosing Party shall be entitled to an injunction or injunctions to prevent breach of the terms of this Agreement. However, neither Party shall under any circumstances or at any time be liable to the other under or in connection with this Agreement in contract, tort or otherwise for any loss of profits, loss of production, reduced production or loss of business or business opportunity, special indirect loss or damage or any remote or consequential loss or punitive loss or damage

8. Dispute Resolution:

If any dispute arises between the Parties hereto during the subsistence of this Agreement or thereafter, in connection with the validity interpretation, implementation or alleged material breach of any provision of this Agreement, the Parties hereto shall endeavor to settle the same amicably. In the event the Parties fail to settle the dispute amicably, the Parties have agreed to refer the dispute to a mutually appointed sole arbitrator. The arbitration proceedings shall be governed by the Arbitration Rules as defined on page 1. The seat of arbitration shall be as defined in Page 1 and English language shall be used in arbitral proceedings. The Arbitrator's award shall be substantiated in writing. The arbitration tribunal shall also decide on the costs of the arbitration proceedings. The award shall be binding on the Parties.

9. Miscellaneous:

- i. Further, none of the provisions of this Agreement shall be deemed to constitute a partnership between the Parties hereto and no Party shall be deemed to be the agent of the other in any way. Nothing in this Agreement shall be construed to result in any claim whatsoever by the Receiving Party against Disclosing Party for reimbursement of costs for any effort expended. This Agreement is for protecting Confidential Information only. Disclosing Party reserves all rights in its Confidential Information and no rights or obligations other than those expressly recited herein are granted or to be implied from this Agreement.
- ii. Any notice or other communication given or made under this Agreement shall, except where expressly stated otherwise, be in writing and in the English language. Any such notice or other communication shall be issued at the address of the Parties mentioned on Page 1 and shall be effective upon actual receipt.
- iii. Either Party shall not be entitled to assign or transfer its obligations under this Agreement to any person or entity without the prior written consent of the other Parties.
- iv. Any amendment to this Agreement must be in writing signed by both Parties.
- v. Execution of this Agreement shall not bind the Parties to enter into any transaction or other business relationship.
- vi. This Agreement shall be governed by the laws as defined on Page 1 and courts as defined on Page 1 shall have jurisdiction.
- vii. This Agreement may be signed in separate counterparts, and facsimile signatures (e.g., a scanned, digital or photo copy of the Agreement having the original signature) or electronic signature will be accepted as originals, provided, however, that both Parties use the same signature method. If any of the attached Standard Terms and Conditions conflict with any other provision of this Agreement, the provision of Agreement supersede over the Standard Terms and Conditions.

End of Standard Terms and Conditions



Chell

[Handwritten signature]

MINUTES OF MEETING

Date: 28/04/2023

Venue: Vasantdada Sugar Institute, Pune
Date: 24th April 2023

A meeting was convened at VSI, Pune by the Hon. Advisor Sir & Hon. DG Sir, with all HODs on 24th April, 2023 for taking review of the on-going collaborative R & D projects with COEP and C-MET.

Following Members Present for meeting

VSI

- Shri. Shivajirao Deshmukh, Advisor
- Shri. Sambhaji Kadupatil, Director General
- Shri. S.C. Gurav, IAO
- Shri. Shivaji Khengare, CA
- Shri. RA Chandgude, TA & Head, SE
- Dr. K.S. Konde, TA & Head, AT & Biofuels
- Dr. Deepali Nimbalkar, Head, Environmental Science
- Dr. P.S. Deshmukh, Head, Soil science & Micronutrient unit
- Shri. P.P. Shinde, Scientist & Head, Agriculture Engineering
- Shri. D.N. Gare, Head, Instrumentation
- Shri. S.T. Chavan, Technical Advisor, ST
- Shri. S. Panda, ST
- Shri. Dr. Shuvashish Behera, Scientist, AT & Biofuels

The minutes of meeting is attached for approval please.

29/4

Shivajirao Deshmukh
29/4/2023

Submitted for approval please

29/4

1/ Page

29/4


29/4

Vasantdada

Vasantdada

Summary of R & D Projects ongoing with COEP & CMET

#	Particulars	Qty
A)	No. of sanctioned projects ongoing with COEP in GC meeting on 21/01/2023	13
B)	No. of sanctioned projects ongoing with CMET in GC meeting on 21/01/2023	02
C)	Total Projects (A)	15
D)	No. of Projects on HOLD ongoing with COEP	01
E)	No. of newly sanctioned projects with COEP in GC meeting on 30/01/2023	03
F)	Total Projects Sanctioned with COEP (A+E)	15
G)	Total Projects Sanctioned with COEP & CMET (C+B) $(f+l)$	17


Principal
 Vasantdada Sugar Institute
 Manjari (Bk), Tal. Havali,
 Dist. Pune - 412 307

Details of Stipend paid to RA Students:

Total RA Students stipend paid till date against 03 Projects as below.

Project No.	Name of Project	VS. Dept.	Name of RA Students	Note For Payment From SE Dept.	Stipend Paid
1.	Investigation of combustion, performance and emission characteristics of an alcohol fuelled (ethanol & methanol) CRDI diesel engine.	SE & AT	Mrs. Pradnya Patil (S. Y. M. Tech)	On 14/02/2023, Against Manpower Rs. 99,200/- (For 08 Month, Rs. 12,400/- month)	Rs. 49600/- For the period 01/10/22 to 31/01/2023 for 4 months.
1.	Study of the Combustion Control System of Bagasse Fired Boiler for Sugar and Cogeneration Plant.	SE	Mr. Anrudha Deepak Govekar (M. Tech)	On 14/01/2023 Against Manpower Rs. 99,200/- (For 08 Month, 12,400/- month)	Rs. 49600/- For the period 01/10/22 to 31/01/2023 for 4 months.
1.	Development of Bulging rate of tube testing system & predicting remaining life of tube placed in high temperature zone.	SE	1) Mrs. Sweta Vinayak Deshmukh (PhD Student) 2) Mr. Chakanwari Pralhad Khole (M Tech)	On 14/02/2023, Against Manpower Rs. 4,45,400/- (For 10 Month, 25,000/- & 12,400/- month)	Rs. 37500/- For the period 15/12/22 to 31/01/2023 for 1.5 months Rs. 13600 For the period 15/12/22 to 31/01/2023 for 1.5 month
				Total stipend paid	Rs. 1,55,300/-

PROJECT-WISE STATUS

Sr. No.	Name of Project	VSI, Dept.	Associated Member	Mode of execution	Project Duration/ Start & completion Date	Discussion, Instructions & Remarks
1.	Life Assessment of Roller Chain for Sugar Industry	TE- R & Chandgude	Dr. P. S. Shinde	One S. Y. M Tech student is working (Mr. S. B. Ingale)	1 Year 01/10/2022	<ul style="list-style-type: none"> > Discussed on progress and next activity > Completed the first part of the project, which involved the static analysis of each part of the roller chain using FEA (Finite Element Analysis) (Ansys) as well as theoretical formulation. > In second part of the project, focus on performing wear analysis of the roller pin and roller. This analysis is being conducted using both experimental techniques and FEA analysis on ANSYS. > For Experimental analysis COEP has identified Pin on Disc Machine which is available in COEP. > The experiments performing on Pin on Disc machine is going on. > In addition to the experimental analysis, conducted FEA of wear analysis by modeling the pin on disc in Ansys. > The simulation to determine wear rate is going on and will present the results.
2.	Treatment of sugar industry / distillery effluent using microbial fuel cell with bio electrode	(1- Dr. D. S. Kumbhakar	Prof. P. A. Sadgir Dr. Archana Thosar	Ph.D student is working	3 Year 01/10/2012 & completed up to 30th Sep. 2023	<ul style="list-style-type: none"> > Experiments using sugar effluent in microbial fuel cell are in progress for the past two weeks. Max voltage of 135 mV was generated however COD reduction is less than 25 % during this period > COEP has communicated the details of items to be purchased for the project. Chemical and glassware have been indentified. Other items like MFC reactors and other electrical consumables are to be indentified in this week.
3.	Optimization of salt removal from saline water using bio-physical-chemical processes	ES- Dr. D. S. Kumbhakar	Dr. P. A. Sadgir		1 Year 01/20/2022	Project on HOLD
4.	Online colour measurement of clear juice using AI techniques	ST- Dr. R. V. Dore & Sri Sakata Gangadharan(ST)	Dr. M. S. Sutaone Dr. Archana Thosar Dr. P. B. Bartakke Dr. Sanyee Tambe	M Tech student is working. Two B Tech students are working	2 Year 01/10/2022 & 30/09/2024	<ul style="list-style-type: none"> > All the required material was received and handed over to COEP team for further necessary activity. > Total online measurement equipment's will be ready in all respect for juice analysis purpose up to 28/04/2023 as per discussion held with Dr. Archana Thosar- Dean R & D. COEP

Principal
 Vasantgadga Sugar Institute
 Marath (R & D) Tail
 Dist. Pune - 412 007

5	Investigation of combustion, performance and emission characteristics of an alcohol fueled (ethanol & methanol) CIDI diesel engine	SI. R.A. Chandgude & Dr. K.S. Rande	Prof. M.R. Nandgaonkar & Dr. S.V. Latare	One S.Y.M. Tech student is working (Mrs. Pradnya Patil)	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> A CFD (Computational Fluid Dynamics) study was performed in the three phase to optimize the injector location on the manifold at two positions, ethanol injector orientation at the upstream location and the injection pressure at orientation. Based on the CFD analysis, optimum parameters are obtained and will be used for experimentation on a CIDI diesel engine. After getting experimental facility, COEP will be carried out experimentation in the month of May & June. Equipment Purchase status PO for Dual fuel injection system placed on 16th March 2023 to M/s. Medhasri Center for Automotive Research, Hoshiarpur (Punjab). Some of the materials are received at COEP and balance material will be dispatched by the end of Month April. (Delivery period at 800 PO 2-3 weeks)
6	Study of the Combustion Control System of Bagasse Fired Boiler for Sugar and Coproduct Plant	SI. R.A. Chandgude	Prof. M.R. Nandgaonkar & Dr. S.V. Latare	One M.Tech student is working (Mr. A.G. Govekar)	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> As suggested by Hon. Advisor sir, the discussion with the management of M/s Vignafar & M/s Vithalrao Shinde sugar mills will be carried out for installation of online bagasse weighing & moisture measurement systems to be installed at three places per mill tandem & its cost implications. As offered by M/s SIDDSHEY Instrumentation Pvt. Ltd., Pune, the proposed cost of these suggested systems will be approximately Rs. 300Lakh. Based on the same further necessary actions will be taken.
7	Distillery fermentation process modeling and optimization using Artificial intelligence (AI) method.	AI-Dr. K.S. Rande	Three B.Tech students working		1 Year 01/10/2022	<ul style="list-style-type: none"> BH molasses based ethanol fermentation (60 batches) is carried out on lab scale at VSI out of which 27 batches were successful. Ethanol fermentation work on sugarcane based ethanol fermentation is under progress on lab scale at VSI. 13 batches were completed out of which 9 were successful. Data based on 31 batches were sent to COEP. Work on lab scale will be completed in end October 2023. If validation is successful on lab scale, demonstration work will have done on plant scale in next season.
8	Development of lab scale sensor for Ferme quality using artificial intelligence (AI)	AI-Dr. K.S. Rande	Prof. Archana Thosar Dr. Jyoti Methar Dr. Radhika Patole		1 Year 01/10/2022 & completed on or before March 2024	<ul style="list-style-type: none"> VSI has collected & completed compositional analysis of Ferme samples (15 control samples & 18 local market samples). Collection of more Ferme samples is on the pipeline which will be tested to make a database. Respective data has been shared with COEP. COEP will use these data for model development.

Principal
Vasantdada Sugar Institute
Mumbai (Bk-1) Tal. Haveli
Dist. Pune - 412307

9	Nanocatalysis assisted hydrogen production in sugar and distillery	Asst. Dr. S.S. Fonde	COEP	RA sponsored & is working	2 Year 10-01-2022	<ul style="list-style-type: none"> Compositional analysis of feedstock materials such as Press Mud, Cane (PMG), spent wash and bagasse is in process Feedstock samples submitted to CMAT for preliminary study Project was effectively started from 1st Dec 2022 through appointment of RA Procurement of photo catalytic reactor status: Purchase order received on 20th Feb 2023 and it will be installed by 30th April 2023 Initial wash experiments on spent wash decolorization were carried out to observe the activity of nanocatalyst (unpublished notes) provided by CMAT
10	Development of bulging rate of tube testing system & predicting remaining life of tube placed in high temperature zone.	SE-RA Chandgude	Dr. P.R. Ohamangeekar Dr. S. P. Surte	PhD student is working (Mrs. Sweta Dohimakh)	1 Year 15/12/2022 & 14/11/2023	<ul style="list-style-type: none"> Discussed on existing condition of project Experimental Testing on several samples of the tube will start after giving Experimental Set up Also Hon. Adviser suggested to identify the solution to reduce internal & external scaling of tube and avoid bulging. Also he suggested to use quality material Hon. DG is suggested to identify particular point in tube where bulging will occurs Equipment Purchase Status: 1) For Tube test set up - Negotiation was done with Lowest Vendor & will release the PO shortly 2) Thermal camera Accessories and software was received at COEP on 13/03/2023 and conduct the demo for tube
11	Estimation of Roof-top solar System in sugar mills & forecasting solar power generation	SE-RA Chandgude	Prof. V.N. Fonde Prof. A.G. Thorat Dr. Anil Tare	One M.Tech student is working (Mrs. M.V. Khair)	1 Year 15/11/2022	<ul style="list-style-type: none"> For data collection, COEP RA student was visited at VSI on 17/05/2023 COEP used the data in which various parameters available and trained model, then tested it and from this model forecasted the day generation. The obtained RMSE value is 0.0058722 with this algorithm, estimate one day before prediction Now the work is going on MWP (technique to forecast ahead of 15 days for forecasting the accurate value, meteorological data is necessary
12	Solar PV cleaning system	SE-RA Chandgude	Prof. V.N. Fonde Prof. A.G. Thorat Dr. Anil Tare	One M.Tech student is working (Mrs. M.V. Khair)	1 Year 15/11/2022	<ul style="list-style-type: none"> For site survey of solar panel system, COEP RA student was visited at VSI on 27/03/2023 The COEP has decided the design to develop a cleaning system using pneumatic and hydraulic system because it will clean dry dust particles as well as sticky dust or debris. Now the prototype development is in progress.
13	Analysis of data collected by Remote advisory system & Machine learning	SE-RA Chandgude	Prof. S.D. Agashe Dr. D.H. Sureshane Dr. Archana Thorat		1 Year 15/12/2022 &	<p>Project on HOLD with COEP. But VSI project is going on.</p> <p>New software development is being done using Power SCADA. The key functionalities for Trends, Alarms, and Notifications via Email, SMS, and</p>

					Events, with real-time data availability over the Internet. At present VISA/Stretto is setting up Server Grade computers for this purpose. With its Internet information server(WS) functionality, monitoring of Screens using standard HTML format from any Mobile/Tablet/PC is possible
34	To make charcoal from bagasse & sugarcane trash				Project on HOLD
35	Development of miniaturized WPC sensor using nanostructured materials.	SOIL- Dr. P Deshmukh	CMET	3 Year 01/10/2022	<ul style="list-style-type: none"> > Potassium sensor developed by CMET at lab level. > Validate the potassium reading sensor with traditional laboratory level at lab level (YS) > Action Pending: 1) Project submitted for funding to Ministry of Electronics and Technology (MeitY), New Delhi. Remark: (1) Funds not received. 2) Manpower problem at CMET Institute.
36	Performance of enhancement of Rotary Rack Machine for sugar cane trash collection.	Agronomy Engg. - P P Shinde	Dr. N E Chaugule- Head & Asst Prof.	PHD student is working (Mr. Ghatar Kishnu)	<ul style="list-style-type: none"> > This project is sanctioned in GC meeting on 30/01/2023. > Prototype is developed by COEP. Further modifications are needed. > The field trials will be conducted in coming crushing season.
37	Manufacturing of Construction bricks from the Ash and Residue remaining after Recovery of Potash from Incineration boiler ESP Ash.	AI - Dr. K J Gondra			<ul style="list-style-type: none"> > This project is sanctioned in GC meeting on 30/01/2023. > Team will visit Jaywant Sugar in the Month of May to see brick manufacturing facility is on incineration boiler ash.

[Signature]
Principal
Vasandada Sugar Industries
Mangon (Bk.), Tal. Hb. Sak.
Dist. Pune - 412 507

[Signature]
19/4

[Signature]
(S C Gurav)
Internal Audit Officer

[Signature]
(Sambhaj Kadupatil)
Director General

MINUTES OF MEETING

Date: 29/03/2023

Venue: Vasantdada Sugar Institute, Pune

Date : 27th March 2023

A meeting was convened at VSI, Pune by the Hon. Advisor Sir, with all HODs on 27th March, 2023 for taking review of the on-going collaborative R & D projects with COEP and C-MET.

Following Members Present for meeting

VSI

Hon. Shri. Shivajirao Deshmukh, Advisor

Shri. S C Gurav, IAO

Dr. R V Dani, Head, ST

Shri. R A Chandgude, Head, SE

Dr. K S Konde, TA & Head, AT & F

Dr. Deepali Nimbalkar, Head, Environmental Science

Dr. P S Deshmukh, Head, Soil science & Micronutrient unit

Shri. D N Gare, Head, Instrumentation

Shri. R P Takale, Sr. Electrical Engineer (SE)

The minutes of meeting is placed below for approval please.

Submitted for approval please.

Shri
1/4

DT

Shri

PROJECT-WISE STATUS

S. No	Name of Project	VSI Dept.	Associated Member and Mode of execution	Project Duration/ Start & completion Date	Discussion, Instructions & Remarks
1	Life Assessment of Roller Drum for Sugar Industry	SE - R A Chandgude	Dr. P.S. Shinde Ph.D student is working	1 Year 01/10/2022	<ul style="list-style-type: none"> Discussed on progress and next activity For Experiments COEP have identified Pin on Disc Machine which is available in COEP The experiments performing on Pin on Disc machine is going on Starting work on FEA analysis of wear rate of roller pin and bush
2	Treatment of sugar industry millinery effluent using membrane fuel cell with bio process	ES- Dr. D.S. Nimbalkar	Prof. P.A. Seldge Dr. Archana Thosar Ph.D student is working	2 Year 03/10/2022 & completed up to 30th Sep 2023	<ul style="list-style-type: none"> COEP is yet to communicate the details of items to be purchased for the project. Sugar effluent for further experiments was brought from a sugar mill since crushing season will soon end however this is yet to be collected by them from VSI. They have also not taken the bagasse and ash brought for the bioelectrode despite repeated reminder. Advisor spoke to Prof. Thosar regarding lack of communication regarding this project from their end and asked to expedite work on the project It was decided that all above points will be communicated to COEP by email at the earliest.
3	Optimization of salt removal from saline water using bio-membrane process	ES- Dr. D.S. Nimbalkar	Dr. P. A. Seldge Ph.D student is working	1 Year 01/10/2022	Project on Hold
4	Online colour measurement of beer juice using AI techniques	ST- Dr. R.V. Dani & Smt. Kakarla Gangadhararam (ST)	Dr. M.S. Sutarone Dr. Archana Thosar Dr. P. P. Karakke Dr. Sanjeev Tande M.Tech students are working Two B.Tech students are working	2 Year 01/10/2022 & 30/09/2024	<ul style="list-style-type: none"> Two RA appointed for the project work in the Sugar Tech department. All instruments, Camera & required accessories etc. purchase process completed and material is received and handed over to COEP team for further necessary activity Fabricated box for assembly of camera is prepared Automation work is in progress at M/s. Softward automation Pvt. Ltd., Pune Assembly of the camera on fabricated box completed and trial will be conducted from 6th to 15th April 2023 at Ajeerkatana SIK Ltd., Satara
5	Optimization of combustion, air-fuel ratio and emission characteristics of an alcohol fuel (ethanol & methanol) CI-diesel engine	SE - R A Chandgude & AT- Dr. K.S. Konde	Prof. M.R. Handgaonkar & Dr. S.V. Lahane One M.Tech student is working	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> CFD simulation of injection system is going on. After getting experimental facility, COEP will perform the experiments. Equipment purchase started PO for Dual fuel injection system placed on 16th March 2023 to M/s. Medhaavi Center for Automotive Research, Hoshiyarpur (Punjab). As per PO, the equipment may be received up to first week of April 2023. (Delivery period as per PO 2-3 week)

Principal
Vasundhara Sugar Industries
Mangari (Bk.), Tal. Haveli
Dist. Pune - 412 201

Study of the Combustion Control System of Bagasse Fired Boiler for Sugar and Cogeneration Plant	SE - RA Chandgude	Prof. Anil Nandgaonkar, Dr. S.V. Lahare One M.Tech Student is working	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> As per mail dt. 16/01/2023 from COEP, the unit cost of online weighing of bagasse & moisture required recently from the supplier will be around Rs. 90 Lacs which should be borne by VSI. However, initially the COEP had agreed upon portable instrument for the measurement of NCO₂, NO, and NCO in flue gases which was procured by the Institute at cost of Rs. 1.12 Lacs. Also it is informed that the similar kind of bagasse weighing system has been installed in M/s. IPCL, Mulhol which needs to be studied by arranging combined visit of SE/RA/EE. In order to guide proposed online bagasse weighing system to be installed in Babarao Shinde sugar mill. Accordingly, the online meeting shall be conducted with COEP.
Distillers fermentation process modeling and optimization using artificial intelligence (AI) methods	AT-Dr. R.S. Konde	Three B.Tech Students working	1 Year 01/10/2022	<ul style="list-style-type: none"> 800 molasses based ethanol fermentation (30 batches) is carried out on lab scale at VSI. Data based on 31 batches were sent to COEP. To create additional data, ethanol fermentation work on sugar syrup based ethanol fermentation is under progress on lab scale at VSI. Work on lab scale will be completed in end October 2023. If validation is successful on lab scale, demonstration work will have done on plant scale in next season.
Development of lab scale sensor for Heera quality using artificial intelligence (AI)	AT-Dr. R.S. Konde	Prof. Archana Thosar, Dr. Shilpa Meshkar, Dr. Rashmi Patole	1 Year 01/10/2022 & completed on or before March 2024.	<ul style="list-style-type: none"> VSI has collected & completed compositional analysis of Heera samples (15 control samples & 48 local market samples). Collection of more Heera samples is on the pipeline which will be tested to make a database. Respective data has been shared with COEP. COEP will use these data for model development.
Non-catalytic assisted hydrogen production in sugar and distillers	AT-Dr. R.S. Konde	CMET	2 Year 10-01-2022	<ul style="list-style-type: none"> Compositional analysis of feedstock materials such as Press Fluid Cake (PMC), spent wash and bagasse is in process. Feedstock samples submitted to CMET for preliminary study. Project was effectively started from 1st Dec. 2022 through appointment of RA. Procurement of photo catalytic reactor status: Purchase order released on 20th Jan. 2023 and it will be installed in 2nd week of April 2023. Initial experiments on spent wash decolorization were carried out to observe the activity of photocatalyst (unclined TiO₂) provided by CMET.
Development of Bulging rate of tube testing system & predicting remaining life of tube placed in high temperature zone	SE - RA Chandgude	Dr. P.R. Dhamangaonkar, Dr. S.P. Buree PhD student is working	1 Year 15/12/2022 & 14/12/2023	<ul style="list-style-type: none"> Discussed on existing condition of progress. Experimental testing on metal samples of the tube will start after getting Experimental Set up. Equipment Purchase Status: 1) Tender for tube test set up was published on 17th March 2023 and the last date of submission is 28/03/2023. 2) Order for thermal camera Accessories and software is placed on 16th March 2023. Same material will deliver on 29/03/2023 at COEP and will conduct the demo for same.
Elimination of Roof-top solar system in sugar mills & installing solar power generation	SE - RA Chandgude	Prof. V.N. Pande, Prof. A.G. Thosar, Dr. Anil Tare	1 Year 15/12/2022	<ul style="list-style-type: none"> Discussed on project. For data collection, COEP RA student will visit at VSI on 23/03/2023. Plan to visit jointly VSI & COEP at Sorbhra SSR Ltd, Wangi, Sangli for Roof top solar System.

Principal
Vasundhara Sugar Industries
Mangri (Bk), Tal. Haveli
Dist. Pune - 412 207

12	Solar PV cleaning system	SE- RA Chandgude	Prof. V N Pande Prof. A G Thosar Dr. Anil Tare	1 Year 15/12/2022	<ul style="list-style-type: none"> > Discussed and suggested to follow up with Dr. Archana Thosar Madam for cleaning system due to Summer season. > For site survey of solar panel system, COEP RA student will visit at VSI on 27/03/2023.
13	Analysis of data collected by remote advisory system & Machine learning	SE- RA Chandgude	Prof. S D Agashe Dr. D.N. Sonawane Dr. Archana Thosar	1 Year 15/12/2022 &	Project on HOLD
14	Development of miniaturized sensor using nanostructural materials.	SOHL- Dr. P Deshmukh	CMET	1 Year 01/10/2022	<ul style="list-style-type: none"> > Potassium sensor developed by CMET at lab level. > Validate the potassium reading sensor with traditional laboratory level at lab level (VSI) > Action Pending: 1) Project submitted for funding to Ministry of Electronics and Technology (MeitY), New Delhi. > Remark: 1) Funds not received. 2) Manpower problem at CMET Institute.
15	Performance of enhancement of Battery Back Machine for agriculture trash collection.		New Project.		This project is sanctioned in GC meeting dt. 30/03/2023.

[Signature]
15/12/2022

[Signature]
S C Guravlikh
Internal Audit Officer

[Signature]
(Sambhaji) Kadupatil
Director General

[Signature]
Principal
Mangal (B.T.)
Dial. P...

Date: 15/03/2023

MINUTES OF MEETING

Venue: Vasantdada Sugar Institute, Pune
Date : 13th March 2023

A meeting was conveyed at VSI, Pune by the Hon. Advisor Sir, Hon. DG Sir VSI, Pune and HODs on 13th March, 2023 for taking review of the on-going collaborative R & D projects with COEP and C-MET.

Following Members Present for meeting

- VSI
- Hon. Shri. Shivajirao Deshmukh, Advisor
- Hon. Shri. Sambhajji Kadupatli, Director General
- Shri. S C Gurav, IAO
- Shri. Shivaji Khengare, CA
- Dr. R V Dani, Head, ST
- Shri. R A Chandgude, Head, SE
- Shri. RV Godage, TA, AT & F
- Dr. Deepali Nimbalkar, Head, Environmental Science
- Dr. P. Deshmukh, Head, Soil science & Micronutrient unit
- Shri. P P Shinde, Head, Agri Engineering & Workshop

[Signature]
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

The minutes of meeting is placed below for approval please.

[Signature]
Team (VISE)

[Signature]
16/3

Pt. modify &
submit.
[Signature]
DG
12/3

Modified minutes are placed below for approval M

[Signature]
2/13

[Signature]
20/3
[Signature]

PROJECT-WISE STATUS

Sr No	Name of Project	VSI, Dept.	Associated Member and Mode of execution	Project Duration/ Start & completion Date	Work done so far	Reason of delay
1	Life Assessment of Roller Chain for Sugar Industry	SE, R.A. Chandigale	Dr. P.S. Shinde & Prof. M.R. Nandgankar Mr. Sunjay Ingale Ph.D student is working	1 Year 01/10/2012	<ul style="list-style-type: none"> > First part of the project: Static analysis of each part of roller chain is completed using FEA (Ansys) as well as theoretical formulation > In second part of project, working on to perform wear analysis of roller pin and roller using experimental technique as well as through FEA analysis on ANSYS. > For Experiments COEP have identified Pin on Disc Machine which is available in COEP > From coming Monday will perform the experiments on Pin on Disc machine > The M.Tech student working on this project have completed his ANSYS class & started working on FEA analysis of wear rate of roller pin and bush 	<p>Remark:</p> <p>Communication of RA students of COEP with VSI is poor</p>
2	Treatment of sugar industry effluent using microbial fuel cell with bio membrane	ES, Dr. D.S. Trambhatkar	Prof. P.A. Sadgir Dr. Archana Thapar Ph.D student is working	2 Year 01/10/2022 & completed up to 30th Sep 2023	<ul style="list-style-type: none"> > Microbial fuel cell set up with bioelectrodes has been established > Sugar effluent provided by VSI was analysed and experiments with the same in MFC started > Initial voltage of 0.3 V and maximum voltage of 0.4 V is observed when sugar effluent is used as anolyte and distilled water is used as catholyte > The set up has been running for around one month however the analysis of treated effluent for parameters like COD, BOD or other parameters after/during experiments has not been done till now. Hence it is difficult to estimate treatment efficiency. Use of other catholytes is also being explored 	<ul style="list-style-type: none"> > The project was started in November 2022. However, requisition and details of items to be purchased have not been received from COEP. They have informed the process for inviting quotations for electrodes and data acquisition system has been initiated. > Demand for stipend has also not been sent by COEP > The student needs to take more inputs from VSI regarding effluent analysis to determine treatment efficiency.

Principal
Vasantkhada Sugar Institute
Mumbai (6k.) Tal. Hissar
Dist. Panipat - 412 307

Optimization of salt removal from saline water using bio-physicochemical processes	ES-Dr. D.S. Nandekar	Dr. P. A. Sarda Ph.D student is working	1 Year 01/10/2022	Project on HOLD	
Online colour measurement of clear juice using AI techniques	SI-Dr. R.V. Dani & Shri. Kataria Gangadharan (SI)	Dr. M.S. Sutarone Dr. Archana Thorat Dr. P.P. Bhatkale Dr. Sanjay Tambe AI Tech students are working Two AI Tech students are working	1 Year 01/10/2022 & 30/09/2024	<p>1) First Step: VSI has identified three nos. of member sugar mills during the season 2021-22 for clear juice analysis. Total 194 samples have been collected & ICUMSA colour analysis was done in factory laboratory along with image of each sample by camera. Co-relation of ICUMSA colour and image resolution was done at COEP.</p> <p>2) Second step: During first step manual collection of the sample was done. In second stage automation of the sample collection is proposed and accordingly following works carried out. 1) Glass apparatus to collect the clear juice sample was purchased from M/s. Huddle Technologies, Pune. 2) Order for cameras and required accessories has been placed through online. 3) Logic for auto collection of clear juice sample in glass apparatus is finalized with M/s. Softbird automation Pvt. Ltd., Pune. 4) Order for fabricated box is given to M/s. Softbird automation Pvt. Ltd., Pune for assembly of the programmable camera, to capture image of clear juice sample automatically collected in glass apparatus. 5) 3 Nos. research associates has been recruited from 15th Feb 2023 in sugar tech laboratory of VSI and they are trained for ICUMSA analysis of juice, Sugar and Molasses.</p> <p>3) Third Step: All material is received at VSI except imported camera. Imported camera from China received at New Delhi. It is expected to deliver at VSI by 20th March 2023 after submission of KYC documents. Fabricated box will be ready at Bhojan on 15th March 2023. We will complete the assembly of the camera on fabricated box and will start trials Mahagaon, SKK and Someshwar SKK sugar mills from 23 March 2023 to till month end. From April first week onwards we will continue the trial at Gandhinagar Sugar Gujarat. After end of season 2022-23, clear juice will be prepared at VSI sugar tech laboratory using sugarcane from VSI field and data will be collected. After all the Data collected during factory & VSI laboratory trials will be submitted to COEP. Based on the data submitted by VSI, COEP will develop softsensor in technical collaboration with VSI.</p> <p>The project will be completed before 31st May 2024.</p>	<p>Identification of vendor for 1) customized glass apparatus 2) Automation of the clear juice sampling apparatus & 3) finalisation of specifications for special imported camera was done by COEP. However VSI assisted COEP for the identification of vendor & procurement of customized glass apparatus for clear juice sampling.</p>

[Signature]
Principal
Vasantkhada Sugar Institute
 Manjari (Bk. 1), Tal. Haveli,
 Dist. Pune - 412 507

3	Investigation of combustion, performance and emission characteristics of an alcohol fueled (ethanol & methanol) OHD diesel engine	AT-Dr. K.S. Konde	Prof. M.R. Handgaonkar & Dr. S.V. Lakane Ms. Pradnya P. Patil, One M.Tech student is working	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> CFD simulation of injection system is going on. Without experimental facility, cannot perform the experiments. Equipment Purchase status: Submitted indent of Dual fuel injection system with Technical specifications. The same is proprietary item as its offer has taken from concern party. PO placed on 18th March 2023. 	Rather poor communication of RA students of COEP with VSI.
4	Study of the Combustion Control System of Bagasse Fired Boiler for Sugar and Cogeneration Plant.	SE-RA Chandgude	Prof. M.R. Handgaonkar & Dr. S.V. Lakane Mr. Aniruddha D. Gorekar, One M.Tech student is working	1 Year 01/10/2022 & 30/09/2023	<ul style="list-style-type: none"> We have visited sugar factory namely, Daund, Sanganner, Saw Tukarem, Someshwar but nowhere the facility of mass of bagasse is available. Without mass of bagasse it's very difficult to proceed. Still we have collected some samples of bagasse and doing some characterization and also theoretical calculations of combustion. So the study will be carried out in the sugar mill where bagasse weighing arrangement is available. The bagasse weighing is main hurdle in the project. 	
7	Optimize fermentation process modeling and optimization using Artificial Intelligence (AI) method.	AT-Dr. K.S. Konde	Three B.Tech students working	1 Year 01/10/2022	<ul style="list-style-type: none"> BH-modules based ethanol fermentation (60 batches) is carried out on lab scale at VSI. Data based on 21 batches were sent to COEP. To create additional data, ethanol fermentation work on sugar syrup based ethanol fermentation is under progress on lab scale at VSI. Work on lab scale will completed in end October 2023. If validation is successful on lab scale, demonstration work will have done on plant scale in next season. 	
8	Calibration of lab scale with sensor for Meera quality using artificial intelligence (AI)	AT-Dr. K.S. Konde	Prof. Arthuro Phose Dr. Shilpa Meshkar Dr. Rashmika Patole	1 Year 01/10/2022 & completed on or before March 2024	<ul style="list-style-type: none"> VSI has collected & completed compositional analysis of Meera samples (4 control samples & 15 local market samples). Collection of more Meera samples is on the pipeline which will be tested to make a database. Respective data has been shared with COEP. COEP will use these data for model development. 	
9	Nano-catalytic assisted hydrogen production in sugar and alcohol	AT-Dr. K.S. Konde	CMET	2 Year 10-01-2022	<ul style="list-style-type: none"> Compositional analysis of feedstock materials such as Press Mud Cake (PMC), spent wash and bagasse is in progress. Feedstock samples submitted to CMET for preliminary study. Project was effectively started from 1st Dec 2022 through appointment of RA. Procurement of photo catalytic reactor status: Purchase order released on 10th Feb 2023. Initial experiments on spent wash decolorization were carried out to observe the activity of photocatalyst (unactivated TiO2) provided 	

Principal
 Mastanbada Sugar Institute
 Marjari (Bk.), Tal. Haveri
 Dist. Pune - 412 307

					by C.MET.	
10	Development of Bulging rate of tube testing system & predicting remaining life of tube placed in high temperature zone	SE- R.A Chandgude	Dr. P.R. Chaturgozkar Dr. S. P. Butte Mr. Shivrao V. Deshmukh - PhD, Mr. Chakrawart P. Khotele- M.Tech students is working	1 Year 15/12/2022 & 14/12/2023	<ul style="list-style-type: none"> Prominent triggering factors involved in Bulging Tube are found. Simulation of Research Problem done. Mathematical Modelling done. Conceptual Design of Experimental setup done. Experimental Testing on metal samples of the tube will start after getting Experimental Set up. Equipment/Purchase Status: 1] Purchasing Process from VSI to Manufacture the Experimental set up from identified Vendor is in process. Its Tender will published on 17th March 2023. 2] Purchasing Process thermal camera Accessories and software is in process. Its Order is placed on 18th March 2023. 	
11	Simulation of Roof-top solar system in sugar mills & forecasting solar power generation	SE- R.A Chandgude	Prof. Y.H. Parole Prof. A.G. Thosar Dr. Anil Tare	1 Year 15/12/2022	<ul style="list-style-type: none"> Plan to visit jointly VSI & CDEEP at Cooke's 500 Ltd, Mangl. Sangli for Roof-top solar System. CDEEP representative will visit to VSI to collect additional Solar data. 	
12	Solar PV cleaning system	SE- R.A Chandgude	Prof. Y.M. Parule Prof. A.G. Thosar Dr. Anil Tare	1 Year 15/12/2022	<ul style="list-style-type: none"> No progress. 	
13	Analysis of glass collected by separate laboratory system & Machine learning	SE- R.A Chandgude	Prof. J.D. Agashe Dr. D.H. Sonawane Dr. Anshu Thosar	1 Year 15/12/2022 &	Project on PROG	
14	Development of miniaturized BPS sensor using nanostructural materials.	SOB- Dr. P. Deshmukh	C.M.E.T	1 Year 01/10/2022	<ul style="list-style-type: none"> Potassium sensor developed by C.M.E.T at lab level. Validate the potassium reading sensor with traditional laboratory level at lab level (VSI) Action pending: 1] Project submitted for funding to Ministry of Electronics and Technology (MeitY), New Delhi. 	<ul style="list-style-type: none"> Funds not received Manage the problem at C.M.E.T Institute
15	Performance of enhancement of Rotary Rack Machine for sugar cane trash collection.		New Project.		This project is not sanctioned. The same project will put for the GC for approval.	

Sambhal
Principal
Vasantgadga Sugarcane
Mangal (Bk.)
Dist. Pune

Slew
(S.C. Gaurav) 20/3
Internal Audit Officer

Sad
(Sambhal) Kadupatil
Director General

MINUTES OF MEETING

Venue: College of Engineering, Pune

Date : 7th February 2023

A meeting was conveyed at COEP, Shivajinagar Pune between VSI, Pune and College of Engineering Pune Technological University (CoEP Tech) on 07th Feb, 2023 regarding the status of collaborative on-going R & D projects.

Members Present

VSI

Hon. Shri. Shivajirao Deshmukh, Advisor
Hon. Shri. Sambhaji Kadupatil, Director General
Shri. S C Gurav, IAO
Shri. Shivaji Khengare, CA
Dr. R V Dani, Head ST
Shri. R A Chandgude, Head, SE
Dr. K S Konde, Head, AT & F
Dr. Deepali Nimbalkar, Head, Environmental
Science
Shri. P G Patil, Technical Advisor, SE

COEP Tech

HON. Shri. Prataprao Pawar, BOG Chairman
Hon. Shri. M. S. Sutaone, Vice Chancellor
Prof. Archana Thosar, Dean R & D
Dr. M R Nandgaonkar, Head (Mech. Engg)
Dr. P R Dhamangaonkar
Dr. S V Lahane
Dr. P S Shinde
Dr. Bartakke
Dr. S P Butee
Respective project students

The technical committee meeting on R & D projects was started by the welcome to all members of the COEP Tech, Pune, and Hon'ble Advisor & Hon'ble Director General, VSI, Pune by Prof. Archana Thosar, Dean R & D, COEP Tech, Pune.

Prof. Archana Thosar, Dean R & D, COEP Tech, Pune and Mr. R A Chandgude, Technical Advisor & Head, Sugar Engineering, VSI, explained about collaborative ongoing R & D projects.

Following points are discussed during the meeting with VSI and COEP Tech faculty members & respective project students.

S.M.A.K.
Principal
Vasundhara Sugar Tr.
Baramati (Bk.), Tal. Haveli,
Dist. Pune - 412 307

PROJECT-WISE STATUS

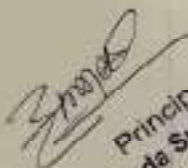
Sr. No.	Project Title	Status
1	Life Assessment of Roller Chain for Sugar Industry	<ul style="list-style-type: none"> ✓ The project was presented by Prof. Prakash Shinde. ✓ Static analysis of chain components was done and dynamic analysis will be carried out. ✓ It was decided to conduct wear studies on Pin on Disc machine available in COEP Tech. ✓ The project will be completed up to <u>30th Sep. 2023</u>. ✓ Suggestions:- 1) Hon. Chairman advised to have mutual interaction with the faculty/expert from metallurgy department to decide the appropriate heat treatment and materials for various parts of roller chain. 2) Project financial benefits to end user to be indicated. 3) Prof. Dr. S P Butee suggested to reduce number of components of chain. 4) Project completion schedule to be submitted. ✓ Hon. Prataprao Pawar appreciated the subject.
2	Treatment of sugar industry/distillery effluent using microbial fuel cell with bio electrode	<ul style="list-style-type: none"> ✓ The project was presented by Ms. Parveda Paranjape, PhD student working on the project. She informed about the status of work. ✓ Microbial fuel cell set up with bio electrodes (using rice husk) has been established. ✓ Sugar effluent provided by YSI has been analyzed. ✓ Suggestions:- 1) YSI Advisor suggested use of conventional electrodes is being explored. Experiments using sugar effluent will now be started.
3	Optimization of salt removal from saline water using bio-physio-chemical processes	<ul style="list-style-type: none"> ✓ This project has been put on hold. ✓ CoEP will continue to work on it however this will be only taken up in case encouraging and practical results are obtained at lab scale.
4	Investigation of combustion, performance and emission	<ul style="list-style-type: none"> ✓ Presented: Need of the project, Concept, Experimentation and CFD simulation results for injector orientation.

Signature
 Principal
 Vasantdada Sugar Institute
 Mosari (Bk.) Tal. Haveri
 Dist. Pune - 412 307

<p>characteristics of an alcohol fuelled (ethanol & methanol) CRDI diesel engine.</p>	<ul style="list-style-type: none"> ✓ The project will be completed up to 30th Sep. 2023. ✓ Suggestions: The project will be carried out as per decided methodology.
<p>Study of the Combustion Control System of Bagasse Fired Boiler for Sugar and Cogeneration Plant.</p>	<ul style="list-style-type: none"> ✓ Presented: Objectives, need and concept. ✓ Sample results of bagasse for moisture. ✓ In meeting discussed that, The bagasse weighing is main hurdle in the project. So the study will be carried out in the sugar mill where bagasse weighing arrangement is available. ✓ The project will be completed up to 30th Sep. 2023. ✓ Suggestions: Collect mass of actual bagasse from Sugar Tech department.
<p>Online colour measurement of clear juice using AI techniques</p>	<ul style="list-style-type: none"> ✓ Dr. Bartakke from COEP, Pune made a presentation on online colour measurement of clear juice using AI techniques. ✓ He explained about work done in Phase-I & difficulties faced such as low pixel camera & variation in image acquisition set up. ✓ The VSI & COEP team has made arrangements to overcome the problems faced in Phase-I, accordingly two partners are identified M/s Soft Hard Automation Pvt. Ltd., Pune for providing automation for taking clear juice sample and M/s Hudke Technologicals, Pune to provide Borosil glass container for collection of clear juice for taking image by camera. ✓ Hon. Chairman, COEP Pune stressed need to complete project during this season. Hon. Advisor, VSI Pune explained that next season will be required to complete the project. ✓ Dr. Dani, VSI Pune explained that project will be completed in two Phases. Phase-I: Preparation of soft sensor for online colour measurement of clear juice & Phase-II: Automation to maintain desired colour of clear juice. ✓ Hon. Chairman agreed for this suggestion. ✓ Following activity plan has been approved by committee. <ol style="list-style-type: none"> 1) Creating image acquisition setup with camera, glass container & enclosure up to 20th Feb 2023. 2) Acquiring sugar cane juice images from at least four factories up to 31st March 2023. 3) Developing & deploying trained model for ICUMSA estimated up to 30th April 2023.


 Principal
 Vasantrao Dada Sugar Institute
 Mumbai (Ex.) Tal. Haveri
 Dist. Pune - 412 307

<p>Distillery fermentation process modelling and optimization using artificial intelligence (AI) methods</p>	<ul style="list-style-type: none"> ✓ On the basis of Lab scale ethanol fermentation data provided by VSI, COEP has developed preliminary model for Ethanol estimation for CO₂. ✓ COEP will further tune model to get accurate estimate. VSI will send lab scale data to COEP every month for model development. ✓ This project work on lab scale will get completed in end October 2023. If validation is successful on lab scale, demonstration work will have done on plant scale in next season.
<p>Development of lab scale soft sensor for Meera quality using artificial intelligence (AI)</p>	<ul style="list-style-type: none"> ✓ For this project data is shared to COEP. COEP will use data for model development. ✓ This project will be completed on or before March 2024.
<p>Nano-catalyst assisted hydrogen production in sugar and distillery</p>	<p>C- MET (Not Discussed)</p>
<p>Development of miniaturized NPK sensor using nanostructured materials.</p>	<p>C- MET (Not Discussed)</p>
<p>Development of Bulging rate of tube testing system & predicting remaining life of tube placed in high temperature zone.</p>	<ul style="list-style-type: none"> ✓ The project was presented by Prof. P R Dhamangaonkar & research student Mrs. Shweta Deshmukh. ✓ Failed tube data is needed. Hence it was decided to get the failed tube samples in COEP Tech Metallurgy Lab. ✓ Procurement of Bulge test machine to expedited. ✓ Prof. Dhamangaonkar explained cost impact due to boiler tube failure of thermal power station, Nashik. ✓ Hon. Prataprao Pawar & Hon. Shivajirao Deshmukh asked, the benefit for sugar industry/ end user of this project. Benefits will be given by COEP. ✓ Suggestion: 1) Hon. Prataprao Pawar suggested tube painting, ceramic coating, use of best quality material for avoiding tube bulging / failure. ✓ Hon. Prataprao Pawar sir highly appreciated the concept of problem and its applicability to the industry and work done till date.


 Principal
 Vasantdada Sugar Institute
 Mahanagar (P.K.), Tal. Haveri,
 Dist. Pune - 412 307

<p>✓ Estimation of Roof-top solar system in sugar mills & forecasting solar power generation.</p>	<ul style="list-style-type: none"> ✓ The presentation given by research student under the guidance of Mrs. Archana Thorar ✓ Solar power project of 200kw & 800kw installed at VSI, Pune, its power generation data submitted to COEP. ✓ Two Sugar factory survey report submitted to COEP.
<p>✓ Solar PV cleaning system.</p>	<ul style="list-style-type: none"> ✓ The presentation given by research student under the guidance of Mrs. Archana Thorar
<p>✓ Analysis of data collected by remote advisory system & Machine learning.</p>	<p style="text-align: center;">Not Discussed</p>
<p>✓ Performance Enhancement of Rotary Rake machine for sugarcane trash collection.</p>	<ul style="list-style-type: none"> ✓ In meeting discussed that, in the trash collection system there is technical problems while collecting the trash as sugar cane field is not plane surface. ✓ Hon. Advisor, VSI Pune said that Rotary rake machine for sugar cane trash collection is very important for sugar mills. Cane trash will be utilised for additional boiler fuel along with bagasse. Trash has more calorific value than bagasse. (its calorific value ranges from 3845 to 4375 kcal/kg). Also he said that, considering cost of the machine, trash collection is rather costly. So cost impact is to be checked. ✓ Hon. Chairman, COEP Pune said that the trash contains more Silica & can be considered as insulating material. Therefore, research should be carried out considering Silica usage as insulating material. VSI & COEP should check this aspect.

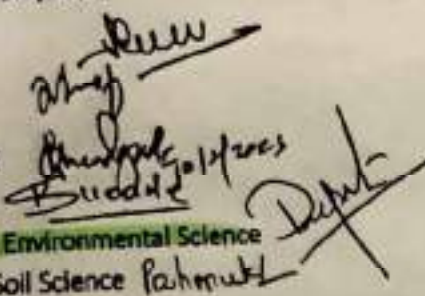

Principal
Vasantdada Sugar Institute
 Maneri (Bk.) Tal. Haveli,
 Dist. Pune - 412 307

The meeting concluded with vote of thanks


-Sambhaji Kadupatil)
Director General

Copy to

- Shri. Shivajirao Deshmukh, Advisor
- Shri. Sambhaji Kadupatil, Director General
- Prof. Archana Thosar, Dean R & D, CoEP
- Shri. SC Gurav, IAO
- Shri. Shivaji Khengare, CA
- Dr. RV Dani, Head ST
- Shri. RA Chandgude, Head, SE
- Dr. KS Konde, Head, AT & B
- Dr. Deepali Nimbalkar, Head, Environmental Science
- Dr. Preeti Deshmukh, Head, Soil Science
- Shri. PG Patil, Technical Advisor, SE



(SC Gurav)
Internal Audit Officer


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



संस्था: मंत्रालय, पंचवटी, २५, एम. भाभा रोड, पुणे - ४११००८

संस्था: मंत्रालय, पंचवटी, २५, एम. भाभा रोड, पुणे - ४११००८

CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET),

to Institute Society, Ministry of Electronics and Information Technology (M.E. & I), India

Panchawati Off. Dr. Homi Bhabha Road, Pune - 411 008, INDIA

Tel: +91 020 25898141

TELEFAX: +91 020 25898390, 25899273

Fax: +91 020 25898180

Web: www.cmet.gov.in

Date: 21.07.2022

To,
Dr. Preeti Deshmukh
M/s Vasantdada Sugar Institute Manjari (BK.),
Pune.

Sub: MoU between C-MET, Pune and M/s Vasantdada Sugar Institute Manjari (BK.), Pune

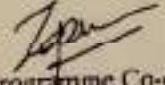
Dear Madam,

It was our great pleasure to have the meeting on 11th July, 2022 for the signing function of MoU between C-MET, Pune and VSI, Manjari.

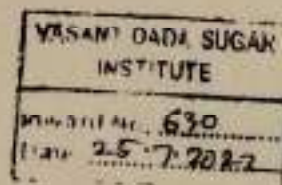
As per the discussion, we are attaching herewith both the copies of MoU, which are (a) already signed by the seniors from both sides (b) along with the stamp of C-MET, Pune and (c) signature of the witnesses by both the parties.

We kindly request you to put the stamp of your institute and also put the relevant names of the witnesses from your side. Further, please share one copy to us for our office records.

Thanks and Regards,


Programme Co-ordinator
(Dr. Umesh Zope)
9650060220


Principal
Vasantdada Sugar Institute
Manjari (BK.), Tal. Haveli,
Dist. Pune - 412 307



Memorandum of Understanding
Between



**Centre for Materials for Electronics Technology
(C-MET), Pune**

and

M/s. Vasantdada Sugar Institute Manjari (Bk.), Pune


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Memorandum of Understanding between
CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET), Pune
and
M/S. Vasantdada Sugar Institute Manjari (Bk.), Pune

This Memorandum of Understanding (herein after referred to as MOU) is made on this 17th July, 2022,

Between


The Centre for Materials for Electronics Technology, an autonomous scientific society Under Ministry of Electronics and Information Technology, Government of India, (hereafter referred as "C-MET") having its registered headquarters at Panchawati, off Pashan Road, Pune-411 008, Pune, India, as **Party of First Part,**

And

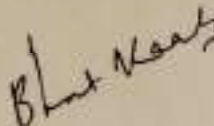
M/s Vasantdada Sugar Institute Manjari (Bk.), Pune [a Company / Trust / Society / Institute registered under Societies Registration Act ,1860 and under the Bombay Public Trust Act ,1950), having its registered office at Manjari (Bk.) Tal. Haveli, Dist. Pune, hereafter referred as "VSI", on the **other part as partners for "C-MET".**

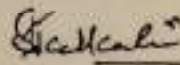
Whereas both C-MET and M/s VSI, (herein after called 'Parties') desire to carry out programs for promoting 'R&D Interactive programs, hereafter referred to as "**Programs**", jointly with the diligence and efficiency as desired within this MOU in conformity with appropriate administrative, financial and educational practices and implement all such plans and activities and reforms as required for the Program.

WHEREAS the C-MET and M/s VSI agree **to carry out 'R&D Interactive programs'**, the parties agree to enter into this MOU with the terms as follows.


Principal
Vasantdada Sugar
Manjari (Bk.), Tal. Haveli
Dist. Pune - 412 307







1.0. OBJECTIVES OF 'R & D INTERACTIVE PROGRAM'

The major objectives of both the parties agreeing under this MOU are:

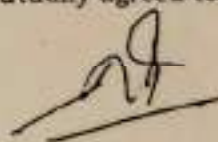
- 1.1. To promote Research interaction between both parties in the area /subject as referred in Annexure 1
- 1.2. To facilitate academic and research interactions among duly authorized officials of both parties and associates for collaborative research.
- 1.3. To increase the relevance of the academic research and consultancy in the research and product development initiatives at C-MET and M/s. VSI
- 1.4. To collaborate / to promote sharing and exchanging information between both parties for mutual benefit and knowledge enhancement.
- 1.5. To conduct joint/collaborative research and consultancy programs as referred in Annexure 1 for applications for commercial and strategic sectors.
- 1.6. To Integrate Industry, academic institutions interested in the development of technology to come on a single platform.

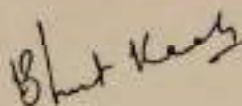
2.0. IMPLEMENTATION AND MONITORING

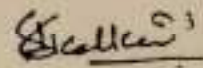
For implementation and monitoring of the program, both parties to MOU, C-MET and M/s. VSI also hereby agree that:

- 2.1 Both the parties shall constitute a Coordination Committee by nominating Officials from C-MET & M/s. VSI as its nominated members. The R & D Programs shall be implemented by a Coordination Committee.
- 2.2 It is further agreed by and between the parties that, the IPR that arise out of joint R & D Programs of C-MET and VSI, and, that has been developed by joint efforts will be held jointly based on separate mutually agreed terms and conditions. Whereas the IPR that arise out


Principal
Vasantdada Sugar Institute
Manjar (Bk.), Tal. Haveri
Dist. Pune - 412 307



 Bhat Keshav


 S. Kulkarni 31/1/2000

of the work solely carried out in or by either party will be that of that specific party to this MOU.

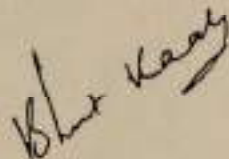
- 2.3 It is further agreed by and between the parties that, unless explicitly agreed otherwise, each Party shall undertake and continue at its expense the timely prosecution and maintenance of all Resulting IPRs which are solely owned by that Specific Party.
- 2.4 It is further agreed by and between the parties that, any material transacted between C-MET and M/s. VSI during any Program under this MOU shall be used only for scientific research purpose. THE MATERIALS SHALL NOT BE USED IN HUMANS OR IN ANIMALS.
- 2.5 Notwithstanding this MoU, C-MET and VSI will sign separate agreement for specific projects/programs.

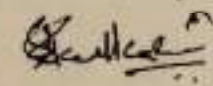
3.0. NON-DISCLOSURE OF CONFIDENTIAL INFORMATION

- 3.1 C-MET and M/s. VSI also agree that during the tenure of this MOU both parties undertake on their behalf and on behalf of their contractors/subcontractors/ employees/ representatives / associates to maintain strict confidentiality and prevent disclosure thereof, of all the information and data exchanged / generated pertaining to R & D work under this MOU for any purposes other than in accordance with this MOU and they will abide by the non-disclosure of any confidential information exchanged during these R & D Programs.
- 3.2 C-MET/ M/s. VSI shall not release / disclose the Materials to any other person or entity and shall ensure that no one will be allowed to take or send the Materials to any other location, unless written permission is obtained in advance from C-MET/ M/s. VSI respectively.
- 3.3 It is also agreed further by and between the parties that, to ensure confidentiality, parties will enter into a separate detailed Non - Discloser agreement.


Principal
Vasantdada Sugar Institute
Manjar (Bk.), Tal. Haveli
Dist. Pune - 412 307





4 | Page


4.0 FINANCE

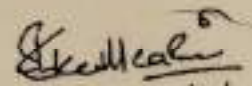
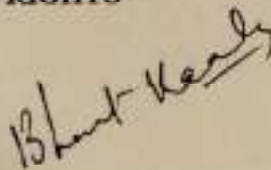
Regarding the financial arrangements during the Project implementation, both the parties to MOU, C MET and M/s. VSI further agree to:

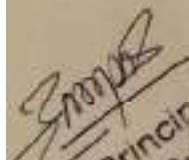
- 4.1 That, both the parties shall submit joint collaborative projects along with associates specifying clearly on their area of activities and their budget requirements, to any government or private funding agencies for financial assistance including that for capital/revenue expenditure.
- 4.2 That, apart from the above, both the parties will engage services of their employees for the Program as envisaged in the project proposal. Both the parties will be responsible for selection, salaries, statutory obligations vis - a - vis their employees / personnel for the execution of R & D work or any other activity under this MOU. No party will be responsible for any payment, demand, compensation or claim of any nature whatsoever of any such employee / personnel of the other party.
- 4.3 That, all expenses in connection with implementation and monitoring such as TA/DA, boarding/lodging and conveyance of officers / staff will be borne by the respective parties through project funds under the respective heads or from the core funds of the respective party.

5.0. INDEMNITY

It is further agreed by and between the parties that, both the parties hereby indemnify and shall keep indemnified and protected the other party and their respective officers and employees from and against any claims or actions arising out of or in any way relating to the provision and implementation of the Program as per this MOU.

6.0 INTELLECTUAL PROPERTY RIGHTS




Principal
Vasantdada Sugar Institute
Mumbai (Bk.) - 400 007
Dist. Pune - 411 007

It is further agreed by and between the parties that, right of the IP
generated under this MOU will be shared between parties based on the
proportion of financial share.

7.0 DURATION

It is agreed by and between the parties that, this MOU will be valid and
remain in force for a period of three years from the date of signing of
this MOU or till three years after the completion of any joint project
undertaken under this MOU, whichever is later. This MOU period can
be extended for further period if necessary, in writing and by mutual
consent.

8.0. TERMINATION

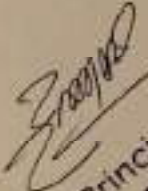
The MOU would be valid for a period of **Three (03) years** from the
date of signing by the parties. It is further agreed by and between the
parties that, either party of this MOU has the right to terminate this
MOU by giving ninety days written notice to the other party.


9.0 AMENDMENT

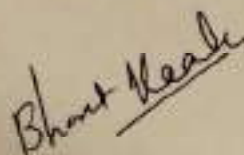
It is further agreed by and between the parties that, this Agreement
shall be the sole repository of the terms agreed to between the parties
and no amendment thereof shall take effect and be binding unless such
amendment is recorded in writing and signed by both the parties.

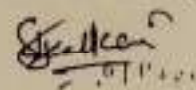
10.0 NOTICES

10.1 That the parties agree and confirm that, any notice and other
communications required to be served on First Party under the terms
of this agreement, shall be considered as duly served if the same shall
have been delivered to or left with or posted by registered mail to


Principal
Vasantlada Sugar Institute
Manjari (Bk.) Tal. Haveli
Dist. Pune - 412 307







Director General, Centre for Materials for Electronics Technology (C-MET), Panchawati, off Pashan Road, Pune-411008 OR its last known address of business.

10.2 That the parties agree and confirm that, any notice and other communications required to be served on Second Party under the terms of this MOU, shall be considered to be duly served if the same shall have been delivered to or left with or posted by registered mail to Second Party OR its last known address of business.

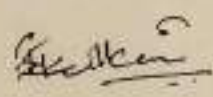
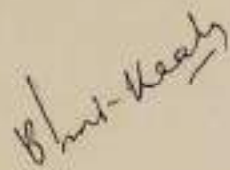
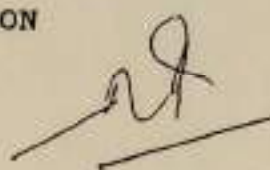
11. Force Majeure

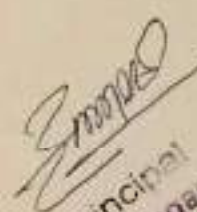
That the parties agree and confirm that, for the purpose of this agreement, force majeure means an event which is beyond the reasonable control of either party, and which makes a parties performance regarding its obligations hereunder impossible or so impracticable as reasonably, to be considered impossible in the circumstances and includes, but is not limited to war, riots, civil disorder, earthquake, fire, explosion, storm, flood, and other adverse weather conditions, strikes, lockouts or other similar action which are not within the power and control of the party, invoking force majeure' to prevent confiscation or any other action by the other party.

The failure of either party to fulfill any of its obligations hereunder shall not be considered to be breach of, or default under this Agreement in so far as such - inability arises from an event of force majeure, provided that the party affected by such event should take all reasonable precautions due care and reasonable alternative measures to the satisfaction of the other party, all with the objectives of carrying out the terms and conditions of this agreement.

In the event of a force majeure, the First Party and Second Party shall consult with each other, with a view to agreeing on appropriate measures to be taken under the circumstances.

22.0 ARBITRATION




Principal
Madada Sugar Institute
Manan (Bk.), Tal. Manan,
Dist. Pune - 412 301

It is further agreed by and between the parties that,

12.1 In the event of any dispute or differences arising out of or in connection with existence, validity, interpretation, extension, performance and termination of MOU, the same shall be settled amicably by mutual consultations or through the good offices of C-MET and Ms. VSI. If such resolution is not possible, then the unresolved dispute or differences shall be referred to Arbitration.

The sole Arbitrator shall be the Secretary, Ministry of Electronics and Information Technology (MeitY), New Delhi-110003. The Arbitration shall be conducted in India in accordance with the rules and procedures of the Indian Arbitration and Conciliation Act of 1996 or any enactment or modification thereof.

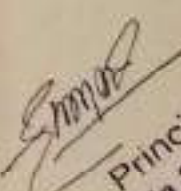
12.2 The venue of arbitration proceedings shall be India at New Delhi and shall be conducted in the English language. The decision of the sole Arbitrator shall be final and binding upon both the parties and the expenses of the arbitration shall be paid as may be determined by the Arbitrator.

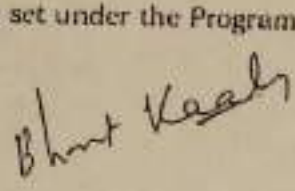
12.3 Parties to this MOU shall continue to Perform their part under this understanding during arbitration proceedings and no payment dues or payable by any of the party to this MOU shall be withheld unless any such payment forms part of the subject matter of arbitration proceedings.

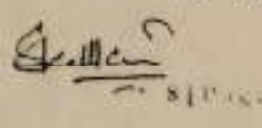
13.0. JURISDICTION

In the event of any dispute arising out of this Agreement, the parties agree that the competent courts of Pune jurisdiction, shall have exclusive jurisdiction to entertain all disputes that may arise between the parties hereto in relation to this Agreement.

Both the parties of this MOU agree to act in good faith and in a spirit of mutual understanding and accommodation to facilitate the achievement of goals set under the Program.


Principal
Vasantdada Sugar Mills
Mansion (Bk.) Tal. Haveli
Dist. Pune 412307


Bhant Kash


J. Man

IN WITNESS WHEREOF the parties here to have caused this MOU to be signed
on their respective names as on this

Bharat Karkar

DG / Director/ Registrar
for and on Behalf
Centre for Materials
for Electronics Technology.

Place: Pune

Date: 11.07.2022



Witness:

1. *[Signature]*
(Dr. Umesh Zope)
2. *[Signature]*
(Dr. Milind Y. Kulkarni)

day of July, 2022.

[Signature]
(Director General)

for and on Behalf
M/s. Vasantdada Sugar Institute
SIVAJIRAO DELHIWALKH
Director General
Vasantdada Sugar Institute
Manjari (Bk.) 412 307
Place: Pune (India)

Date: 11.07.2022



Witness:

1. *[Signature]* (Pr. Japrao Pawar)
2. *[Signature]*
(Sambhoji Kadu Poth)

[Signature]
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

ANNEXURE - 1

Sr. No.	Area / Subject
1	Soil nutrient sensor - NPK Sensor (Soil Science)
2	Nanomaterial characterization (Tissue culture)
3	Catalytic (nano-material) waste degradation (Alcohol Technology & biofuels) (Environmental Science)
4	Hydrogen production (Alcohol Tech. & Biofuels)
5	Thermoelectric material for earth system
6	CO ₂ capture and utilization using artificial catalysts (Env. Science)



Shant Khande

Shant Khande


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Online portal for NCS-TCP activity
Virus indexing & genetic fertility testing
(Mother plant/stock cultures certification) (2023)

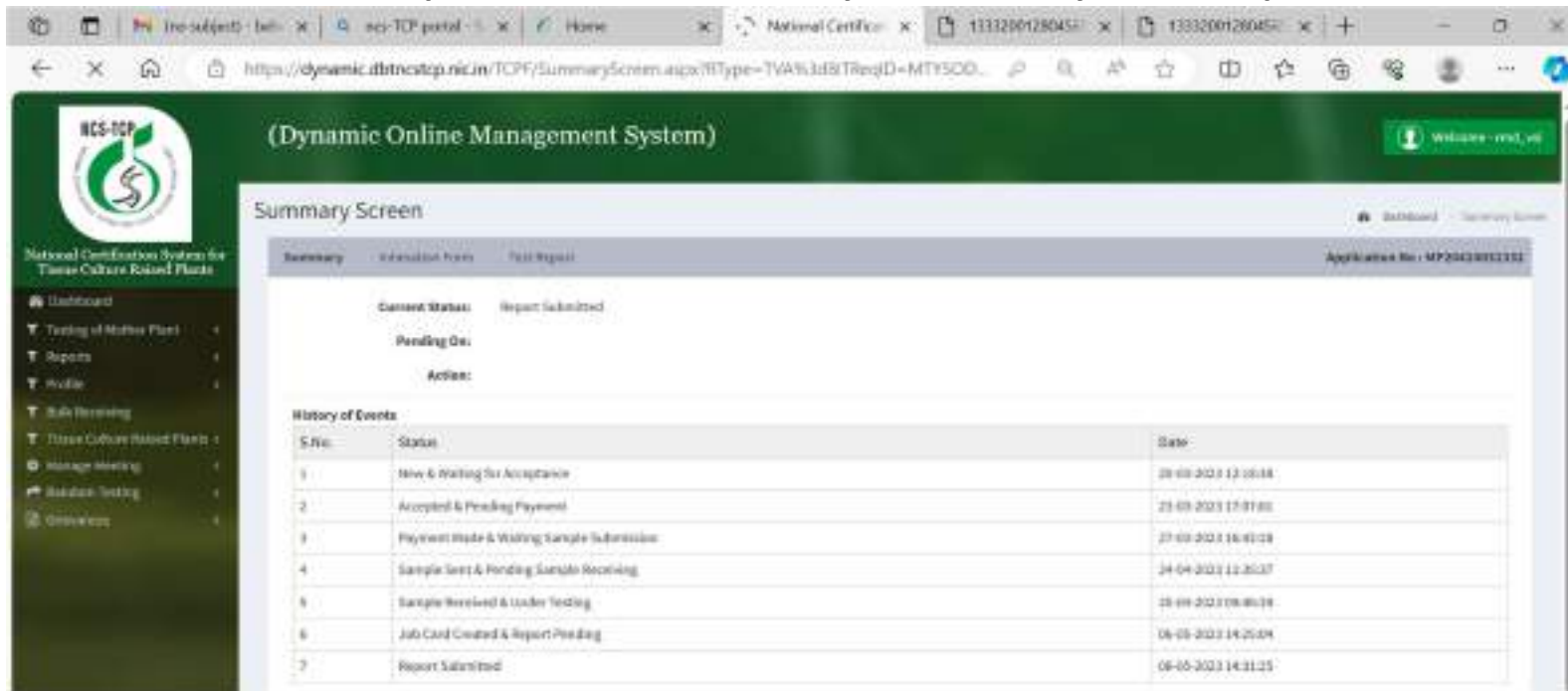
The screenshot shows the NCS-TCP (National Certification System for Tissue Culture Raised Plants) online portal. The dashboard displays a table of Mother Plant/Stock Culture(s) with the following data:

S.No.	Application No.	Submitted By	Submitted On	Current Status	Pending On
1	MP01329112301	Ran Biotech	29/11/2023	New & Waiting for Acceptance	Vasantdada Sugar Institute
2	MP0422312310	Rise N Shine Biotech Pvt. Ltd.	22/11/2023	New & Waiting for Acceptance	Vasantdada Sugar Institute
3	MP0423312317	Rise N Shine Biotech Pvt. Ltd.	22/11/2023	New & Waiting for Acceptance	Vasantdada Sugar Institute
4	MP02218112301	Micron Bioplants India Pvt Ltd	18/11/2023	Accepted & Pending Payment	Micron Bioplants India Pvt Ltd
5	MP10017112301	new	17/11/2023	New & Waiting for Acceptance	Vasantdada Sugar Institute


Principal
Vasantdada Sugar Institute
Manjan (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Online portal for NCS-TCP activity -Total activity for test report (2023)



The screenshot displays the 'Summary Screen' of the NCS-TCP (National Certification System for Tissue Culture Related Plants) portal. The page title is '(Dynamic Online Management System)'. The user is logged in as 'vijayee_rvet_vt'. The application number is 'MP2023031331'. The current status is 'Report Submitted'. The pending due date is not specified. The action is also not specified. A 'History of Events' table is shown below.

S.No.	Status	Date
1	New & Waiting for Acceptance	20-03-2023 12:08:18
2	Accepted & Pending Payment	23-03-2023 17:01:00
3	Payment Made & Waiting Sample Submission	27-03-2023 16:40:28
4	Sample Sent & Pending Sample Receiving	24-04-2023 12:20:37
5	Sample Received & Under Testing	25-09-2023 09:46:38
6	Job Card Created & Report Pending	06-10-2023 14:20:04
7	Report Submitted	08-10-2023 14:31:25


Principal
Vasantdada Sugar Institute
Manan (Bk.), Tal. Havell,
Dist. Pune - 412 307



Online portal for NCS-TCP activity after submission of report(2023)

The screenshot displays the NCS-TCP (National Certification System for Tissue Culture Related Plants) online management system dashboard. The page title is "(Dynamic Online Management System)" and the user is logged in as "Welcome - rmd_15". The dashboard is titled "Mother Plant/Stock Culture(s)" and contains a table with the following data:

S.No.	Application No.	Submitted By	Submitted On	Current Status	Pending On
111	MP2042001011	Rise N Shine Biotech Pvt. Ltd.	28/01/2023	Report Submitted	
112	MP2042001011	Rise N Shine Biotech Pvt. Ltd.	28/01/2023	Report Submitted	
113	MP2042001011	Rise N Shine Biotech Pvt. Ltd.	25/02/2023	Report Submitted	
114	MP2042001011	Rise N Shine Biotech Pvt. Ltd.	25/02/2023	Report Submitted	
115	MP2042001011	Rise N Shine Biotech Pvt. Ltd.	18/02/2023	Report Submitted	

The table includes a pagination control at the bottom showing page 21 of 30.


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Online portal for NCS-TCP activity -Test report generation (2023)

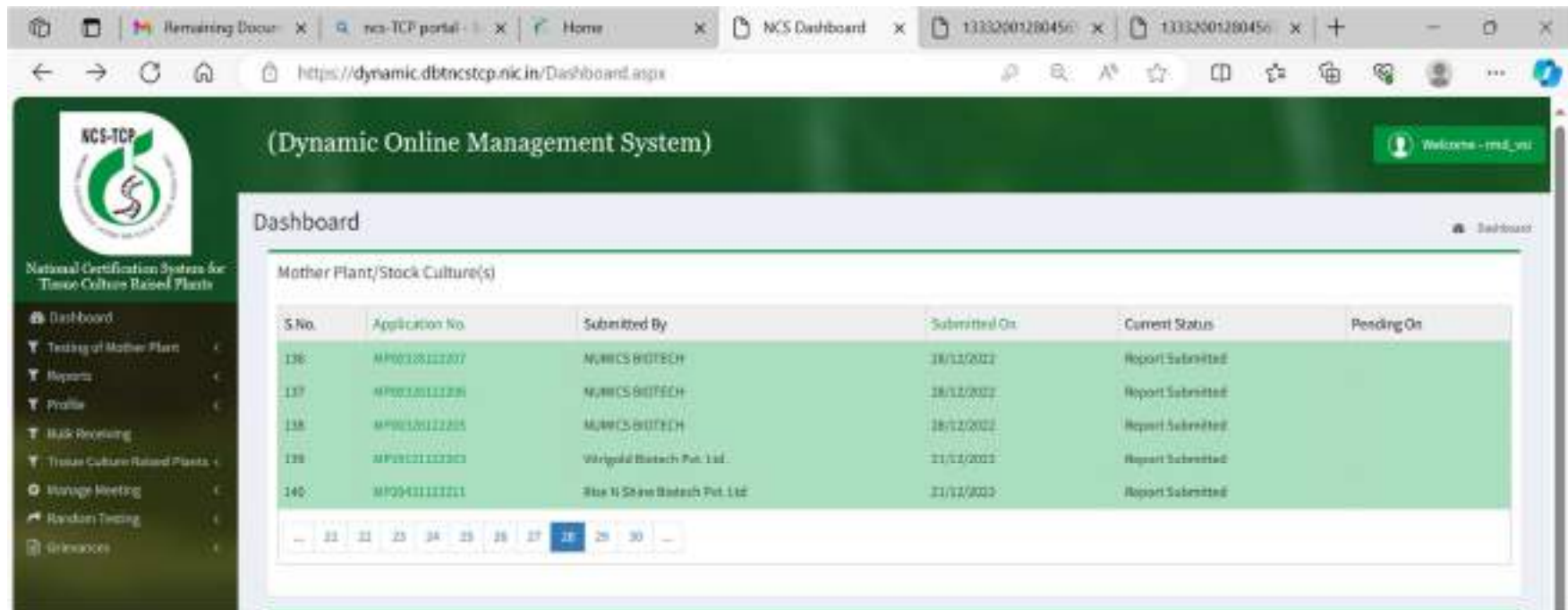
	Vasantdada Sugar Institute, Manjari (Bk), Tal: Haveli Dist. Pune MAHARASHTRA Accreditation number: TL2022/A005	Date: 06.05.2023		
Name and Address of Tissue Culture Production Facility:		Rise N Shine Biotech Pvt. Ltd, Dataprabha, Ganeshwadi, Thur: Pune MAHARASHTRA		
Plant species tested: Banana				
Total Number of samples: 150				
Particulars of testing		Viruses to be tested		
Sample Registration number (20 digits)	PCR		ELISA	
	Banana bunchy top virus	Banana streak virus	Cucumber mosaic virus	Banana bract mosaic virus
204070032325042311001	Negative	Negative	Negative	Negative
204070032325042311002	Negative	Negative	Negative	Negative
204070032325042311003	Negative	Negative	Negative	Negative
204070032325042311004	Negative	Negative	Negative	Negative
204070032325042311148	Negative	Negative	Negative	Negative
204070032325042311149	Negative	Negative	Negative	Negative
204070032325042311150	Negative	Negative	Negative	Negative
Remarks, if any: Sample no: 044, 062, 067, 088, and 101 to 120 are positive for Banana bunchy top virus (BBTV).				
 (Signature of the Head of ATL/date)		✓  (Sign/Name of Scientist (Virology)/date)		




Principal
Vasantdada Sugar Institute
 Manjari (Bk.), Tal. Haveli,
 Dist. Pune - 412 307



(Mother plant/stock cultures certification) (2022)



The screenshot shows a web browser window with the URL <https://dynamic.dbtncstcp.nic.in/Dashboard.aspx>. The page title is "(Dynamic Online Management System)". The user is logged in as "Welcome - rmd_vsi". The dashboard displays a table of "Mother Plant/Stock Culture(s)" with the following data:

S.No.	Application No.	Submitted By	Submitted On	Current Status	Pending On
136	MPW120112207	NJWICS BIOTECH	28/12/2022	Report Submitted	
137	MPW120112208	NJWICS BIOTECH	28/12/2022	Report Submitted	
138	MPW120112205	NJWICS BIOTECH	28/12/2022	Report Submitted	
139	MPW120112203	Virgula Biotech Pvt. Ltd.	21/12/2022	Report Submitted	
140	MPW120112211	Rita N Shree Biotech Pvt. Ltd.	21/12/2022	Report Submitted	

The table includes a pagination control at the bottom showing page 28 of 30.


Principal
Vasantdada Sugar Institute
Manan (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Online portal for NCS-TCP activity after submission of report (2022)

The screenshot displays the NCS-TCP portal interface. The header includes the NCS-TCP logo and the text "(Dynamic Online Management System)". A navigation menu on the left lists various options such as Dashboard, Testing of Mother Plant, Reports, Profile, Bulk Reporting, Tissue Culture Raised Plants, Manage Meeting, Random Testing, and Grievances. The main content area shows the "Summary Screen" for a specific application. The current status is "Report Submitted". Below this, there is a "History of Events" table with columns for S.No., Status, and Date.

S.No.	Status	Date
1.	New & Waiting for Acceptance	28-12-2022 10:42:47
2.	Accepted & Pending Payment	02-01-2023 10:45:47
3.	Payment Made & Waiting Sample Submission	23-01-2023 11:45:38
4.	Sample Sent & Pending Sample Receiving	28-01-2023 12:52:02
5.	Sample Received & Under Testing	27-01-2023 10:59:29
6.	Job Card Created & Report Pending	31-01-2023 10:30:39
7.	Report Submitted	30-01-2023 16:37:05


Principal
Vasantdada Sugar Institute
Manan (Bk.), Tal. Havell,
Dist. Pune - 412 307



Online portal for NCS-TCP activity -Test report generation (2022)

	Vasantdada Sugar Institute, Manjari (Bk), Tal: Haveli Dist. Pune MAHARASHTRA Accreditation number: TL2022/A005	Date: 31.01.2023		
Name and Address of Tissue Culture Production Facility:		NUMICS BIOTECH, SURVEY NO.314/4-A, NATIONAL HIGHWAY - 8, AT & PO : VLLAGE : VAGHASI TA & DIST ANAND GUJARAT		
Plant species tested: Banana				
Total Number of samples: 25				
Particulars of testing		Viruses to be tested		
Sample Registration number (20 digits)	PCR		ELISA	
	Banana bunchy top virus	Banana streak virus	Cucumber mosaic virus	Banana bract mosaic virus
003070012327012312001	Negative	Negative	Negative	Negative
003070012327012312002	Negative	Negative	Negative	Negative
003070012327012312024	Negative	Negative	Negative	Negative
003070012327012312025	Negative	Negative	Negative	Negative
Remarks, if any: NA				
 (Signature of the Head of ATL/date)		 (Sign/Name of Scientist (Virology)/date)		




Principal
Vasantdada Sugar Institute
 Manjari (Bk), Tal. Haveli,
 Dist. Pune - 412 307





महाराष्ट्र MAHARASHTRA

2022

07AA 449383

अनुक्र. 17051 दि. 25 MAY 2022

दस्तावेजाचा प्रकार प्रतिज्ञापत्र/AFFIDAVIT

दस्ता नोंदणी करणारा उपाहेत का ? होय/नाही

मिळकतीचे वर्णन

मुद्रांक विफल घेणाऱ्याचे नांव

पत्ता 216 व 300, सिव्ही 19/89

दस्तावेजाचा प्रकार 514/89

हस्ताक्षरकर्त्याचे नांव व पत्ता

मन्नीज एल. ब्रह्माळे

पत्ताना क्र. 2301072

को.टी. कळंडे रोड, पुणे-३६.

मुद्रांक विफल घेणाऱ्याची स्त्री

ज्या कायद्यान्वये ज्ञाती मुद्रांक खोली केला.

त्यांनी त्याच कायद्यान्वये ६ महिन्यांच्या आत वापरण्याचा आहे



11 MAY 2022

मुद्रांक लिपीक
पुणे करिला

MEMORANDUM OF AGREEMENT

This MEMORANDUM OF AGREEMENT is made on this 6th day of June Two thousand and Twenty Two BY AND BETWEEN President of India, acting through -----, Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi, hereinafter referred to as the 'DBT' (which expression unless excluded by or repugnant to the subject shall mean and include its successor-in-office and assigns) of the ONE PART;

[Handwritten signature]

[Handwritten signature]

AND

Vasantdada Sugar Institute, Pune a society under the Societies Registration Act – 1860, having its registered office in/at Manjari (Bk), Tal.: Haveli, Dist.: Pune Maharashtra State, India, Pin-412307, hereinafter referred to as VSI (which expression shall where the context so admits include its successors and permitted assigns) of the OTHER PART;

WHEREAS DBT being desirous of Accreditation Test Laboratory (ATL) decided to support a project submitted by Dr. Rachayya Devarumath (Vasantdada Sugar Institute) for the attainment of the objectives, hereinafter described in the Annexure I annexed hereto;

This Memorandum of Agreement (MoA) defines the role and responsibilities of the participating agencies, monitoring and other matters related to the National Certification System for Tissue Culture Raised Plants (NCS-TCP).

NOW THE PARTIES HERETO AGREE AS FOLLOWS:-

1.0 . ROLE OF DEPARTMENT OF BIOTECHNOLOGY, NEW DELHI

To provide funds to the extent of Rs. 167.568 Lakhs over a period of five years from the date of sanction of the project, to Dr. Rachayya Devarumath, VSI for undertaking activities as detailed in Annexure I. Details of the funds to be provided are given in Annexure II.

2.0 . ROLE OF Vasantdada Sugar Institute (Institute/NGO)

- 2.1. To provide their contribution of (NIL) for five years from date of sanction of the project as detailed in Annexure – II. *(provide the cost in place of NIL if a jointly supported project).*
- 2.2. To provide existing facilities as mentioned in the project document.
- 2.3. To be responsible for accomplishing objectives identified and activities listed.
- 2.4. To allow the Scientists authorized by DBT to work with the Research & Development team of the center in all stages of process development and production.
- 2.5. To recruit all scientific and non-scientific staff as sanctioned by DBT.
- 2.6. To prepare and submit all periodical reports and other documents that would be required by DBT.
- 2.7. To maintain a separate audit head of account for the grants received from DBT for the project.
- 2.8. To submit an annual audited statement of expenditure incurred under the project.



- 2.9. To ensure effective utilization of the grant given by DBT for the purpose for which it was granted and to ensure timely progress of project work.
- 2.10. The manpower, both scientific and non-scientific, recruited shall be purely on contractual terms & conditions such that the contract for engagement of the manpower shall run concurrently with the said project period only.

3.0 DURATION OF PROJECT

- 3.1 Duration of project shall be five years from the date the Project has been sanctioned by DBT.

4.0 RIGHTS OF OWNERSHIP/TECHNOLOGY TRANSFER AND UTILIZATION

- 4.1 The know-how generated from the project by VSI will be the joint property of VSI and DBT, Government of India. It shall be the responsibility of Vasantdada Sugar Institute to take necessary action for protection of the intellectual property arising out of the PROJECT through proper instruments, such as, patents, copy rights, etc.
- 4.2 The know-how developed may be transferred to other entrepreneurs on a non-exclusive basis on such terms and conditions as may be determined by DBT.
- 4.3 All the assets including the equipment and produce acquired will be the property of DBT and shall not be utilized for purposes other than those for which the grant has been sanctioned. The rights of VSI under this MoA shall not be transferred to any other party without prior approval in writing of DBT.
- 4.4 It shall be the responsibility of the project investigator (s) and VSI to ensure that support of DBT is suitably acknowledged in the in scientific publication/ patents/ technology transfer documents etc. arising out of the PROJECT. It shall also be the responsibility of the project investigators and institute to ensure the inclusion of reference/ grant number and duration of the financial support while making the acknowledgement of the financial support received from DBT.

5. SECRECY

It is hereby agreed that the participating agencies shall keep information and data collected completely secret provided that the right to transfer the technology shall rest with the DBT.



3



6. MONITORING

- 6.1 The progress of implementation of the project and proper utilization of grant shall be reviewed by the DBT and by the Monitoring Committee set up by DBT.
- 6.2 The periodic progress of physical achievements and the utilization of funds, statement of expenditure shall be evaluated by the Monitoring Committee.
- 6.3 The Comptroller and Auditor General of India, at his discretion shall have the right of access to the books and accounts of VSI for the grants received from DBT for this project.
- 6.4 The DBT may terminate the grant at any stage if it is convinced that the grant has not been properly utilized or appropriate progress has not been made. In the event, DBT terminates the grant, VSI shall hand over all documents including technical details and equipment purchased related to the project.

7.0 DURATION OF MEMORANDUM OF AGREEMENT

This MoA will remain in force for the duration of the project and until all claims are settled between DBT and VSI.

8.0 ARBITRATION

In the event of any question, dispute or difference whatsoever arising between the parties to this Agreement out of or relating to the construction, meaning, scope, operation or effect of this Agreement or the validity of the breach thereof shall be referred to an Arbitrator to be appointed by mutual consent of both the parties herein. If the parties cannot agree on the appointment of the Arbitrator within a period of one month from the notification by one party to the other of existence of such dispute, then the Arbitrator shall be nominated by the Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. The provisions of the Arbitration and Conciliation Act, 1996 will be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications or reenactments thereof.



4



9.0. GOVERNING LAW

This Contract shall be governed by the Law of India for the time being in force.

IN WITNESS WHEREOF the parties hereto have signed, sealed and delivered this Agreement on the day, month and year first above written in presence of:

Signed by -----


(Designation)

For and on behalf of The President of India

Signatures of two witnesses (from DBT):

i.

ii.

Signed and stamped by: 

(Shivajirao Deshmukh)

Director General

For and on behalf of Vasantdada Sugar Institute

SHIVAJIRAO DESHMUKH

Director General

Vasantdada Sugar Institute

Manjari (Bk.) 412 307

Dist. Pune (India)

Name, Signature and stamp of Two Witnesses (from *Institute/University/Organization*):


i. R. M. Devarumath


ii. K. Harinath Babu



Annexure – I of MoA

Detailed Project Activities

Details of the activities to be undertaken by

Vasantdada Sugar Institute, Manjari (Bk), Tal.: Haveli, Dist.: Pune Maharashtra State, India, Pin - 412307 under the project entitled "National Certification System for Tissue Culture Raised Plants (NCS-TCP)"

Objectives:

1. Providing dedicated functional laboratory along with adequate manpower for virus indexing and genetic fidelity testing.
2. Extending services for both i.e. virus indexing and genetic fidelity/ uniformity testing for all tissue culture crops listed in the SOPs or as specified in the certificate of accreditation.
3. Ensuring maintenance of sufficient stock of diagnostic reagents, primers, equipment etc. for timely testing and certification of samples received from TCPFs.
4. Recruiting sanctioned manpower and arranging their internal/external training.
5. Adopting the approved SOPs and formats reporting procedure as prescribed under NCS-TCP guidelines.
6. Testing of stock culture/mother plant tissue for the viruses listed under SOPs.
7. Testing and certification of tissue culture raised plants of recognized tissue culture production facilities.
8. Issuance of certificate of quality based on test report for freedom, from viruses and genetic fidelity or uniformity within the prescribed timelines as per NCSTCP guidelines.
9. Visit to recognized tissue culture facilities for drawing of samples for batch certification of tissue culture plants, as and when required.
10. Maintenance of appropriate records related to virus indexing, genetic fidelity testing and certification.
11. Providing copies of test reports, certificates and detailed report of sample processed to NCSTCP Management Cell on monthly basis. It will also provide other documents desired by DBT from time to time.
12. Ensuring infra-structure for documentation and storage of samples for at least one month.
13. Ensuring effective utilization of grant disbursed by NMC for the purpose for which it was granted and ensuring timely progress of project work.
14. Forwarding relevant samples to referral center for referral testing within 7 days of intimation of dispute for redressal of grievances under intimation of NMC.
15. Ensuring adequate IT infrastructure for online processing of samples and generating job card, certificate of quality and other online services offered by NCS-TCP.
16. Forwarding every 20th random samples of certified batches of tissue culture raised plants to Referral Centers for random testing.



Annexure – II of MoA

Details of Funds:

Project coordinator / PI's Name and Address:

Dr. R M Devarumath, Scientist, Molecular Biology & Genetic Engineering Lab.,
Vasantdada Sugar Institute, Manjari (Bk), Tal. – Haveli, Dist. Pune – 412307,
Maharashtra State, INDIA

DBT Sanction Order No. and Date: No. BT/AB/03/02/2021 dated: October 1, 2021

Total Cost: Rs. 167.568 Lakhs

Duration: Five Years (October 1, 2021 to September 30, 2026)

(Rupees in Lakhs)

Items	I year 2021-22	II year 2022-23	III year 2023-24	IV Year 2024-25	V Year 2025-26	Total
Non-recurring (Equipment etc.)	23.504	-	-	-	-	23.504
Manpower	23.2128	23.2128	23.2128	23.2128	23.2128	116.064
Consumables	3.0	3.0	3.0	3.0	3.0	15.0
Travel	1.0	0.50	0.50	0.50	0.50	3.0
Contingencies	1.0	1.0	1.0	1.0	1.0	5.0
Overhead	1.0	1.0	1.0	1.0	1.0	5.0
Others (If applicable)	-	-	-	-	-	-
Total	52.7168	28.7128	28.7128	28.7128	28.7128	167.568



TERMS & CONDITIONS OF THE GRANT
(To be signed and enclosed with MoA)

1. Approval of the Research proposal and the grant released would be for the specific project mentioned in paras I to V of this proposal and grant should be exclusively spent on the project for which it has been sanctioned within the stipulated time. The Institute is not permitted to seek or utilise funds from any other organisation (Government, Semi Government, Autonomous or Private) for this research project. Any unspent part of amount would be surrendered to the Govt. of India through an account payee demand draft drawn in favour of the "Drawing and Disbursing Officer, Department of Biotechnology, New Delhi", and carry forward of funds of the next financial year for utilization for the same project may be considered only with the specific approval of the Department of Biotechnology (DBT).
2. For permanent/semi-permanent assets acquired solely or mainly out of the grant, an audited record in the form of a register in the prescribed proforma (enclosed at **Appendix-'A'**) shall be maintained by the Institute. The term "assets" means (I) immovable property and (II) movable property of a capital nature, where the value exceeds Rs. 1000/- The grant will not be utilised for construction of any immovable property, Full facilities by way of accommodation, etc. for the project will be given by the Institute.
3. All the assets acquired from the grant will be the property of Govt. of India and should not without the prior sanction of the Deptt. of Biotechnology, be disposed of, or encumbered or utilised for purpose other than those for which the grant has been sanctioned.
4. At the conclusion of the project, the Govt. of India will be free to sell or otherwise dispose of assets which are the property of the Government. The Institute shall render to Govt. necessary facilities for arranging the sale / disposal of these assets. **The Government may, however, consider the request of host institutions to retain the assets created under a project for carrying out similar work for the promotion of science.**
5. The implementing Institute/PI will furnish progress report of work on the project every six months. The progress of the project will also be reviewed/monitored at least once a year by the concerned Task Force/Project Monitoring Committee, etc. In addition the DBT shall designate Scientists/Specialists to visit the Institute periodically for reviewing the progress of work and for suggesting such measures as to ensure early realisation of the objectives of the project. On completion of the project five copies of a consolidated report of the work done on the subject would be submitted to the Department of Biotechnology.
6. The Institute is required to send to DBT a list of assets referred to at Sl. No. 2 above at the end of each financial year as well as at the time of seeking further installments of the grant.
7. The Institute would furnish to the Deptt. of Biotechnology a Utilization Certificate (Copy enclosed at **Appendix - 'B'**) and an audited statement of expenditure (Copy enclosed at **Appendix - 'C'**) duly signed by the P.I., the Head of the Institute and the


8



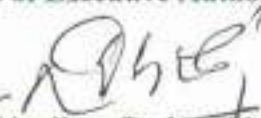
Head of the Finance wing, pertaining to the grant at the end of each financial year as well as a consolidated statement of expenditure at the end of the completion of the project.

8. A stamped receipt be sent to the Deptt. of Biotechnology on receipt of the Cheque/ Demand draft towards each release.
9. The Comptroller and Auditor-General of India at his discretion shall have the right of access to the books and accounts of the Institute for the grant received from the Government.
10. The Institute would maintain separate audited accounts for the project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest thus earned should be reported to the Deptt. of Biotechnology.
11. Sale proceeds, if any, as a result of the development of the project arising directly from funds granted by the Deptt. of Biotechnology shall be reported to the Govt. of India. The Govt. of India may at its discretion allow a portion of such receipt to be retained by the Institute for its utilisation for the project activities.
12. Investigators/Institutes wishing to publish papers based on the research work done under Deptt. of Biotechnology projects should acknowledge the financial support received from the Deptt. of Biotechnology.
13. Investigators/Institutes may utilize various resources such as the Bioinformatics resources, experimental materials, reagents, cell lines, animals, etc. from the National facilities/Institutes/Centres established by this Department as per the terms of transactions followed by them. More information may be obtained about such facility from DBT websites: <http://www.dbtindia.org/> www.dbtindia.nic.in, www.btisnet.ac.in.
14. Investigators / Institutes shall follow the detailed instructions on technology transfer and Intellectual Property Rights (IPR) as given at Annexure - V. The same has the approval of the Ministry of Finance, Govt. of India vide Deptt. of Expenditure, Plan Finance II – Division Letter No. 33 (5) /PF.II/99 dated 22nd February, 2000. Any deviation from these instructions may be brought to the notice of this Department.
15. Investigators / Institutes may file patents with the help of the Biotechnology Patents Facilitating Cell (BPFC) established at DBT on priority bases. The format for filing the patents may be seen at Annexure –VI.
16. The Govt. of India (Deptt. of Biotechnology) will have the right to call for drawings, specifications and other data necessary to enable the transfer of know-how to other parties and the Institute shall supply all the needed information at the request of the Department of Biotechnology which will ensure confidentiality. The information required for commercializing Biotechnologies may be furnished to this Deptt. as per the format enclosed at Annexure – VII. More information on commercialization can be found at the website www.ebc.nic.in.



17. The Institute may not entrust the implementation of the work for which the grant is being sanctioned to another institution and to divert the grant receipts as assistance to the latter institution. However, in such situations the express permission of DBT may be obtained. In case the grantee is not in a position to execute or complete the project, it may be required to refund forthwith to the Govt. of India (Department of Biotechnology) the entire amount of grant received by it.
18. The human resources that may be engaged for the project by the Institute are not to be treated as employees of the Govt. of India and the deployment of such human resource at the time of completion or termination of project will not be the concern/responsibility of the Govt. of India. The Organisation may make reservations for Scheduled Castes, Schedule Tribes etc. in the human resource to be engaged for the project in accordance with the instruction issued by the Govt. of India from time to time.
19. The Deptt. of Biotechnology reserves the right to terminate the grant at any stage and also to recover the amounts already paid if it is convinced that the grant has not been properly utilized or the work on the project has been suspended for any unduly long period or appropriate progress is not being made.
20. The project will become operative with effect from the date of release of the first installment for the project.
21. If the Investigator to whom a grant for a project has been sanctioned leaves the institution where the project is being implemented, he shall submit five copies of complete and detailed report of the work done by him on the project and the money spent till the date of his/her release and shall also arrange to refund the unspent balance, if any.
22. The Memorandum Agreement, to be sent to Department of Biotechnology should be on Non- Judicial stamp paper of Rs. 100/-.
23. The organisation should maintain subsidiary accounts of the Govt. of India grant and furnish it to the Audit Officer as and when the recurring and non-recurring expenditure exceeds the limits of Rs. 5.00 lakhs.

Signature of Executive Authority of Institute/University With seal:


(Shivajirao Deshmukh)
SHIVAJIRAO DESHMUKH
Director General
Vasantdada Sugar Institute
Manjari (Bk.) 412 307
Dist. Pune (India)

Date:

06/06/22

Signature and seal of Project Coordinator (if applicable)

(RM. Devarumath)



Dr. R.M. Devarumath Ph.D.
Scientist

Date: 06/06/22

MB & GE Division
Vasantdada Sugar Institute
Manjari-Pune

Signature and seal of all Principal Investigator(s)/ Co- PI (s):

1. (K. Harinath Babu)



2. (BH Pawar)



Date: 06/06/22

Signature and seal of all Co-Investigator (s)

(SG Dalvi)



Date: 6.6.22



Phone : (020) 26902100 - 30 lines
Fax : (020) 26902244
E-mail : admin@vsiisugar.org.in
Web site : www.vsiisugar.com



BY HAND DELIVERY

VASANTDADA SUGAR INSTITUTE
Manjari (Bk.) Tal. : Haveli, Dist. : Pune - 412 307, Maharashtra, India.

VSI/Reg./ 1338 /2023-24

Dt. 02/05/2023

Confirmation of Admission/Registration

To,
Nalini Arun Shinde
Tissue Culture Section,
Agricultural Science and Technology,
Vasantdada Sugar Institute, Manjari (Bk), Pune

Sub:- Confirmation of admission for Ph.D. in Biotechnology.
Ref:- University Letter PGS/PGS/1298/Dt.30/07/2022

Dear Nalini Arun Shinde,

I am happy to inform you that the Research and Recognition Committee in Biotechnology, Faculty of Sciences and Technology has approved your research topic as is as follows:-

Title of the PhD Thesis:- "Irradiated Chitosan-Silicon Conjugate for Mitigating Water Deficit Stress Tolerance in Sugarcane and Marigold".

Your admission is now confirmed as per Ph.D. Rules 7 (ix). The Details of your admission are:-

1. Subject: Biotechnology
2. Faculty: Science
3. Guide: Dr. S. G. Dalvi
4. Co-guide: Dr. P. G. Kaware
5. Date of Registration: 28th April 2022
6. Period of Registration from: 28th April 2022 to 27th April 2027.

Please note that your admission will be governed by the Savitribai Phule Pune University rules for the Degree of Doctor of Philosophy (Ph.D.) with effect from 29th Nov.2016.

Please also note you will have to pay the fees prescribed as per the following schedule.

The first installment will have to be paid within a month from the date on which your admission is confirmed. The successive installments will have to be paid within a month from the date of completion of each year. In case of failure to pay the prescribed fees as per the schedule mentioned. A late fee of Rs. 100 for Indian students and Rs. 500 for foreign students per month from the due date of payment shall be charged.

Thanking You.




D. B. Ghule
Registrar

Copy to:

1. The Dy. Registrar, (Ph.D. Unit), University of Pune, Pune- 411007
2. The Guide: Dr. S. G. Dalvi, Vasantdada Sugar Institute Vasantdada Sugar Institute Addr: Manjari Bu Ta: Haveli (excluding Corporation Area) Dist: Pune.
3. The Co-guide: Dr. P.G. Kaware, ICAR, DFR, Pune

Reply to be sent on the name of Institute and not on individual's name.

Collaborative Experiment with DFR proposed during 2023-24

Name of experiment: Effects of Vasant Urja on agronomic, yield and flower quality traits of marigold crop

Objective: To evaluate application of Vasant Urja for enhancement of flower quality and yield of popular marigold varieties

Experimental details:

Year of start : 2023-24
Year of completion : 2023-24
Time frame : Two seasons
Date of planting : 30/09/2023
Tentative date of Harvest : 30/01/2023
Soil type Location : Black Cotton Soil
Design : RBD
Replications : Three
Varieties : Pusa Narangi Gaiinda, Punjab Gaiinda No.1 , KAUM-2, BM-4

Treatment details (8 Treatment combinations):

T1: Control (no treatment)
T2: Foliar spray on seedling 15 days after seed sowing
T3: T2+ Seedling root dipping (br 30 min.) before transplanting
T4: T3 Foliar spray at 15 days after transplanting
T5: T4 Foliar spray at the time of flower initiation
T6: T5+ Foliar spray at 20 days after T5
T7: T6+ Foliar spray at 20 days after T6
T8: T7-Foliar spray at 20 days after T7

Observations to be recorded:

1. Germination percentage
2. Transplanting survival percentage at 8 and 15 DAT
3. All the observations will be recorded after the 48h of foliar spray.

Morphological observations to be recorded:

- a) Plant Height
- b) Days to flower bud initiation.
- c) Days to 50% flowering.
- d) No. Of flowers
- e) Flower Diameter.
- f) Flowering duration.
- g) Weight of flower
- h) Vase life
- i) SPAD analysis

Location: Vasantdada Sugar Institute, Manjari



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Memorandum of understanding (MoU) between VSI and DFR

ICAR's Directorate of Floriculture Research (DFR)

Manjari Pune and Vasantdada Sugar Institute, Pune signed a MoU on February 28, 2022 for collaborative research work. Dr. KV Prasad Director, DFR, Dr. Naveen

Kumar, Principle Scientist (Floriculture) Dr. PG Kavar, Principle Scientist (Genetics & Plant Breeding) from DFR side and Mr. Shivajirao Deshmukh, Director General, Mr. Sambhaji Kadupatil, Officer on Special Duty, Dr. SG. Dalvi Scientist (Tissue Culture) from VSI were present.

Operational details of research effort and collaboration will be made in common research programmes in Research, training and extension work in Plant Tissue culture, Molecular Biology and Genetic Engineering, Plant Microbiology, Food Science & Technology, Soil Science and Environmental Sciences etc. Research instrumentation facility and library facilities available



with organizations will be made available to the faculty and research scholars. There shall be an exchange of students for academic, research and training purposes. The Advisory Committee will be set & meet

at least once in a year alternatively in the institutions to review the activities. Collaborative projects will be submitted for financial grants. The technologies available both institutes will be evaluated and recommended for improving sustainability of sugarcane and floriculture crops. Under the MOU the

biosimulators from the VSI will be evaluated and recommended for enhancing the quality (essential oils, color, post-harvest quality, vase life etc) and quantity as yield in floriculture crops and different floriculture crops will be evaluated for their integration in sugarcane agriculture as intercrops, development of biopesticides/ bioinsecticides etc.

Prospective use of Artificial Intelligence in Sugar & Allied Industries

Dr. Sanjeev Tambe, Adjunct Prof. ICT Mumbai and Ex Head, Chemical Engineering & Process Division, NCL, Pune had visited VSI on March 15, 2022 and given a talk on 'Prospective use of artificial intelligence in sugar & allied Industries'. Mr. Shivajirao Deshmukh, Director General, VSI and Mr. Sambhaji Kadupatil, OSD, VSI were present. Mr. Sambhaji Kadupatil gave a brief introduction of Dr. Tambe and started the meeting cum discussion.

Dr. Tambe started his presentation with special focus to sugar & allied industries with application of artificial intelligence (AI). He emphasized the possibility of simulation of human intelligence in

machines (software or hardware). He said that the input variables will be mapped with output (yield, conversion, selectivity, profit, production and efficiency) in AI. He described different types of process models (phenological models, Empirical models and Black-box models) can be used to map data. He informed about the principal components of AI such as artificial neural network (ANN), deep learning, fuzzy logic, evolutionary algorithms etc. He explained few case studies of AI (polyethylene plants and gross power plant) used in industrial application. After the discussion, Director, General, VSI recommended AI and advised all Departments to identify projects for AI implementation.

S. Sambhaji Kadupatil
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli
Dist. Pune - 412 307



महाराष्ट्र MAHARASHTRA

2021

BG 379391

महाराष्ट्र सरकारची प्रवृत्ती मुद्रांक खरेदी केला आहे स्वामी त्याच कारणासाठी
 या स्टॅम्प व पहिल्याच्या आत वापर करावयाचा आहे.

वसुंधरादादा/ अनुषंगी कर्मांक : MoV.
 दस्त नादणी करवाव आहेंत का :
 मूळी होणार असल्यास दुसऱ्या निबंधक कार्यालयाचे नाव :
 विक्रमतीचे बळकत :
 मूल्य रकम :
 मुद्रांक विकत घेणाऱ्याचे नाव व पत्ता : Dr. K. V. Prasad, Pune
 मूल्य वसुंधरादादा Sugar Institute
 मूल्य असल्यास नाव व पत्ता : Mayor, Parbhare
 मूल्य रकम : 500
 मुद्रांक विक्री नोंद वही अनु. क्रमांक : 8920 दि. 0-3-FEB-2022
 मुद्रांक विकत घेणाऱ्याची सही :
 प्रत्यक्षाधारक मुद्रांक विकत घ्यावी सही/पत्ता/
 परवाना क्रमांक :

वसुंधरादादा साखर संशोधन संस्थेचे
 पुणे
 28 JAN 2022
 प्रथम मुद्रांक लिपीक
 वाभावर पुणे कार्यालयात

The Pune Lawyers Consumer's
 Co-op Society Ltd. - Pune-5
 LIC. No. 2201111

Umbrella Memorandum of Understanding
 between
ICAR-Directorate of Floricultural Research, Pune
 and
Vasantdada Sugar Institute, Pune



(For facilitating Research on mutual areas of interest Training Postgraduate Research)

This Memorandum of Understanding (hereinafter referred to as MoU) is made on this 28th day of the month of February in the year 2022 and between the ICAR-Directorate of

[Signature]
 Principal
 Vasantdada Sugar Institute
 Manjil (Bk.), Tal. Haveli
 Dist. Pune-412 307

[Signature]

[Signature]

Floricultural Research, Pune (Name of the ICAR Institute) having its Head Office at Pune [hereinafter called "ICAR-DFR, Pune." First party], a constituent Research Institution of the Indian Council of Agricultural Research, Krishi Bhavan, New Delhi-110 001 on the ONE PART and the **Vasantdada Sugar Institute** [Autonomous Body having its headquarters at Pune [hereinafter called "VSI, Pune" Second party] on the OTHER PART (who for the purpose of this MoU are hereinafter collectively referred to as the parties).

The parties, having discussed fields of common research interests and allied activities between the two institutions, have decided to enter into long-term collaboration for promotion of students' training and quality postgraduate research in cutting edge areas in accordance with the provisions contained in the Guidelines issued vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or as revised from time to time.

WHEREAS the "First Party" is involved in the studies on Research on Flower and Ornamental plant species (specific mandated domain within the approved disciplines/divisions),

AND WHEREAS the "Second Party" VASANTDADA SUGAR INSTITUTE, PUNE, formerly known as DECCAN SUGAR INSTITUTE, PUNE is autonomous body registered under *SOCIETIES REGISTRATION ACT 1860* and under BOMBAY PUBLIC TRUST ACT, 1950 in the year 1975 and recognized by Dept. of Science & Industrial Research, Dept of Sci & Technology, Dept. of Biotechnology, Savitribai Phule Pune University, Shivaji University, Kolhapur and ICAR etc having specific areas of research like R & D activities related to sugarcane production, breeding, protection and processing.

AND WHEREAS it has been considered expedient to agree in writing to participate jointly in the projects requiring expertise and logistics from both the parties.

Article 1. Scope

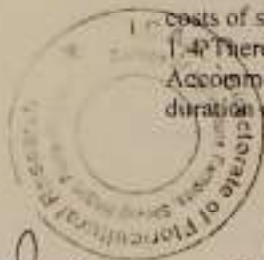
1.1 The Second party will recognize the First party as an Institute for conducting advanced research, development activities, education, training and Extension activities related to Plant Tissue culture, Molecular Biology and Genetic Engineering, Plant Microbiology, Soil Science, Food Science & Technology in sugarcane and allied crops, etc for the thesis requirement of the research students for Masters and Doctoral studies. The Second party will involve Scientists of the ICAR Institute for the collaborative research work and for guiding students working for the said degree as recommended by its Director General in accordance with the University rules and regulations.


1.2 Operational details of research effort and collaboration will be made in common research programmes and/or projects restricted to specific mandated domain within the approved disciplines/divisions. The objective(s) for research work for a student coming from a Second party outside NARS should be exclusively different as far as possible.

1.3 Research instrumentation facility and library facilities available with the First party and the Second party will be made available to the faculty and research scholars. However, the costs of specific consumables will be borne by the respective organizations.

1.4 There shall be an exchange of students for academic, research and training purposes. Accommodation in the Hostel shall be arranged, wherever possible, as per existing rates. The duration of exchange visits will be determined by mutual consent between both the parties.

Page 2 of 5




Principal
Vasantdada Sugar Institute
Mardan (Bk.), Tal. Haveli
Dist. Pune - 412 307

(Signature of First Party)


(Signature of Second Party)

Article 2. Management

2.1 Director of the First party and the Director General/Head of the Institution of the Second party will be responsible to work out operational details of co-operation between the two organizations and ensure proper and effective implementation of this MoU.

2.2 The Advisory Committee will meet at least once in a year alternatively in the institutions of the First party and the Second party to review the activities. This meeting shall include presentation on the academic and research activities, which should be open to the students, faculty and scientists.

Article 3. Exchange of Information

3.1 The term "information" includes scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged, or arising under project descriptions entered into pursuant to this MoU.

3.2 The parties support the widest possible dissemination of information. Each party in joint projects shall be given the right to use, disclose, publish or disseminate such information for any and all purposes.

Article 4. General Provisions

4.1 It is understood that the First party and the Second party subscribe to the principle of equal opportunity and do not discriminate on the basis of race, sex, age, caste or religion.

4.2 Both parties understand that all financial agreements will have to be negotiated separately and will depend on the availability of funds.

4.3 Both parties acknowledge that exchange of students from one party to the other shall be subject to the availability of funds and shall comply with the regulations and policies of the First party and the Second party.

4.4 Any research publications arising will be jointly published in accordance with the provisions laid out in Item 3.2.1C of the Guidelines for the students to conduct research for their degree programme as trainees at ICAR institutions as notified *vide* Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised guidelines, if any, as may be issued from time to time.

4.5 A copy of the thesis/dissertation will be submitted to the First Party after the award of the degree by the Second party.

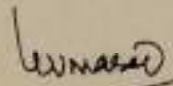
4.6 All questions related to this MoU arising during its term will be settled by the parties by mutual agreement. Disagreements at the operating level shall be forwarded to respective higher officials for appropriate resolution failing which an arbitrator of mutual acceptance may be identified for the settlement of dispute, if any.


4.7 All questions not foreseen related to this MoU will be handled by the parties by mutual agreement.

4.8 Nothing in this MoU is intended to affect other cooperation or collaborations between the parties.

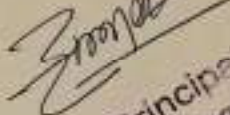
Article 5. Intellectual Property Rights

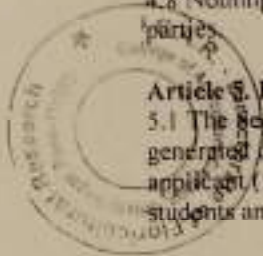
5.1 The Second party will be expected to ensure protection of the Intellectual Property Rights generated or likely to be generated during the student's research work. The ICAR as the first applicant (for its institute) and the Second party shall be the joint applicants for IPRs and the students and involved scientific staff shall be included as the inventor/breeder/author. Both


(Signature of First Party)


(Signature of Second Party)

Page 3 of 5


Principal
Vasantdada Sugar Institute
Manjeri (Bk.), Tal. Haveli,
Dist. Pune - 412 307



the parties will expect to ensure protection of Intellectual Property Rights generated or Likely to be generated during the research work. If the ICAR is the first applicant (for its institute) the second party shall be the joint applicant for the IPR and involved scientific staff shall be included as the inventor/ breeder/author. The 'ICAR Guidelines for Intellectual Property Management and Technology Transfer/Commercialization' as amended from time to time shall be the reference for exploitation of the generated intellectual property, whose management and benefits sharing shall be mutually decided in each case.

Article 6. Admission and Fees

6.1 All those who wish to work as trainees or for Master/Doctoral programme under this MoU must apply for the same at the Second party. The allocation of Major Guide/Advisor would be finalized before the registration and will be governed by the provisions laid out in items 3.2.1A and 3.2.2A of the Guidelines for the students to conduct research for their degree programmes as trainees at ICAR institutions as notified vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time, for the students from within NARS and outside NARS, respectively.

6.2 Admission of the students and the award of degrees for different programmes will be the responsibility of the Second party as per the rules and regulations.

6.3 Allotment of the students at the First party will be done by the approval of Director of the First party and Director General/Head of the Institution of the Second party.

6.4 The First party would have the right to screen the student's eligibility for admission based on their academic period.

6.5 The PME Cell of the First party in consultation with the representative of the Second party shall decide the location and sharing quantum of research work.

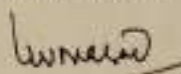
6.6 The number of student(s) at any particular time will be subjected to the availability of research facilities and scientists' time to guide thesis research at the First party institution.

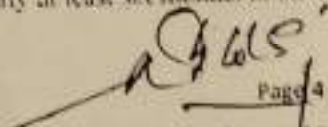
6.7 Any student(s) admitted to the First party for training/postgraduate research, if found violating the rules and regulations laid down by the First party or indulge in such activities that amount to tarnishing the image of the Institute, or cause damage to the property, the registration of such student(s) would be summarily terminated. The Second party will not complete the formalities of issuing the certificates to such students until they compensate the losses to the First party.

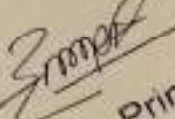
6.8 Fees will be charged from the students by the First party as per Guidelines for the students to conduct research for their degree programmes as trainees at ICAR institutions vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time. No fee may be charged by the First party from the students registered with AU/DU within NARS. However, a student registered with a Second party, outside NARS, will deposit fee of Rs. 10,000/- for training duration of 3 months (not leading to a degree/dissertation) and Rs. 30,000/- per semester (six months) for training, research, dissertation exceeding three months. Any change in fee structure by ICAR will be applicable from the date of revision and shall be charged by the First party.

Article 7. Entry into effect, modification and termination

7.1. This MoU shall become effective on the date it is signed by the parties and shall be valid for three years extendable up to five years. Both parties shall review the status of the MoU at the end of each three/five-year period to determine any modification, whenever necessary. The period of validity of this MoU may be extended by mutual consent up to five years. This MoU may be amended by mutual written agreement and may be terminated at any time by either party upon written notification signed by the competent authority of the party initiating termination. Such notification must be given to the other party at least six months in advance from the effective date of termination.


(Signature of First Party)


Page 4 of 5
(Signature of Second Party)

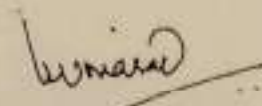


Principal
Vasantdada Sugar Institute
Manjari (Bk), Tal. Havelli,
Dist. Pune - 412 307

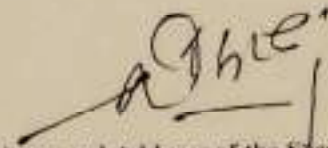
7.2 All joint activities not completed at the expiration or termination of the MoU may be continued until their completion under the terms of this MoU.

7.3 No amendment or modification of the MoU shall be valid unless the same is made in writing by both the parties or their authorized representatives and specifically stating the same to be amendment of the MoU. The modifications/changes shall become part of the MoU and shall be effective from the date on which they are made/ executed, unless otherwise agreed to.

This MoU has been executed in two originals, one of which has been retained by the First party and the other by the Second party).

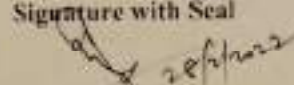
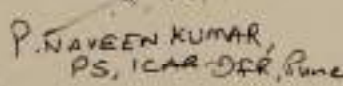
IN WITNESS WHEREOF, the parties have executed this MoU and represent that they approve, accept and agree to terms contained herein.


डॉ. के. वी. प्रसाद (Name and Address of the First Party)
Dr. K. V. Prasad,
Director, ICAR-DFR, 
College of Agricultural Campus,
Shivajinagar, Pune-411005,
Maharashtra, India,
Tel No. 020-25537025; 9868149259



(Name and Address of the Second Party)
Shri Shivajirao Deshmukh,
SHIVAJIRAO DESHMUKH
Director General
Vasantdada Sugar Institute,
Manjari (Bk.) 412 307,
Dist. Pune, (India).

Date

Date

Witness 1 
Witness 2 
P. NAVEEN KUMAR,
P.S., ICAR-DFR, Pune

Witness 1 
Witness 2 


Prashant G. Kaware
P.S., ICAR-DFR
Pune




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307





MEMORANDUM OF UNDERSTANDING
(MOU)
BETWEEN
VASANTDADA SUGAR INSTITUTE, PUNE
AND
COLLEGE OF ENGINEERING, PUNE



This is a Memorandum of Understanding (MOU) dated 4 Jan 2022 between Vasantdada Sugar Institute, Manjari (BK), Tal: Haveli, District: Pune : 412307 (hereafter referred to as "VSI" and College of Engineering Pune having its office at 5, Wellesly Road, Shivaji Nagar, Pune (hereafter referred to as 'COEP', which expression shall include its successors and assigns). Each party shall be individually referred to as "Party" and collectively as "Parties".


- (a) VSI is a premier research and development organization in sugar and allied industry. It is an autonomous body, which is a society registered under the Societies Registration Act, 1860 and under the Bombay Public Trusts Act, 1950. Established in the year 1975 by the sugarcane grower members of cooperative sugar factories in the State of Maharashtra, it is the only organization of its kind in the world. The Institute performs, under one umbrella, all scientific, technical and educational functions relevant to the sugar industry. VSI is recognized as a Centre for Research by the Department of Science and Technology of the Central Government. It is also recognized as a Centre of Research for undertaking studies leading to Ph.D. Degrees of University of Pune and Shivaji University, Kolhapur

AND

- (b) College of Engineering Pune, an Institute of national heritage and importance (hereinafter referred to as "COEP") having its establishment at Wellesly Road, Shivaji Nagar, Pune - 411005, Maharashtra, INDIA is represented by Dr. B.B. Ahuja, Officiating Director, of the Institute.
COEP is an Autonomous Institute of 'Government of Maharashtra' established in 1854 with an objective to provide instruction and undertake research in various branches of Engineering, Technology and Management for the advancement of learning and dissemination of knowledge in such branches. It is a top-tier Institute in India that boasts on sustained culture of academic excellence, scientific breakthroughs, and high-tech innovation. As COEP works diligently to realize its mission of providing the best learning, teaching and research opportunities to students and academicians alike, it continues to support students with the basics of modern knowledge and high values.

The hallmark of COEP education is its strong and widespread alumni network, support of the industry and the camaraderie that the institute shares with several foreign universities. The institute is consistently ranked amongst the




Principal
Vasantdada Sugar Institute
Manjari (Bk), Tal. Haveli,
Dist. Pune - 412 307

top 50 technical colleges in India and its alumni have contributed a lion's share in development of national infrastructure.

1.0 OBJECTIVES OF THE MOU

The objectives of this Memorandum of Understanding is to promote interaction between VSI and COEP under the proposed modes of collaboration as detailed below and/or as mutually agreed between the Parties; to engage in an effort to promote academic, need based and applied Research & Development as well as its activities to develop and expand relationships with sugar industry. It is agreed by and between the parties that the R & D project work would be executed jointly within the following objective and scope of the project and the responsibilities of each of the implementing agencies.

VSI and COEP will mutually design electives in some specific areas for undergraduate and post graduate programmes.

VSI will offer internships to undergraduate and post graduate programmes and can acts as guide in project works/ thesis if possible.


2.0 GENERAL TERMS OF MOU

- 2.1 **Duration of MOU:** This MOU shall be operational upon signing and will have an initial duration of three year. All activities conducted before this date within the vision of the joint collaboration will deemed to fall under this MOU.
- 2.2 **Coordination:** In order to carry out and fulfil the aims of this agreement, each party will appoint an appropriate person(s) to represent its organization and to coordinate the implementation of activities. VSI and COEP Personnel will meet regularly (preferably with two days' notice) to discuss progress and line of action to carry-out the need based and applied R & D works beneficial to society especially to the stakeholders of sugar industry.
- 2.3 **Technical and Financial Support:** Addendums to this MOU will be developed for specific technical and financial support activities. These Addendums will provide a detailed description of the role, responsibility, and financial contribution of each party. Work plans and reporting requirements will be clearly outlined in the Addendums.
- 2.4 **Termination of MOU:** The partnership covered by this MOU shall terminate upon completion of the agreed upon period. The agreement may also terminated with a written one-month notice from either side. In the event of non-compliance or breach by one of the parties of the obligations binding upon it, the other party may terminate the agreement with immediate effect

This MOU, unless extended by mutual written agreement of the parties, shall expire at the end of 3 years from the Effective Date of this MOU ("Term").

2 | Page




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

This MOU may be amended or terminated earlier by mutual written agreement of the Parties at any time before the expiry of the Term as mentioned above.

Further, either Party shall have the right to unilaterally terminating this MOU upon 90 days prior written notice to the other Party.

However, the early termination of this MOU, whether mutual or unilateral by either of the Party, shall not affect any obligations of the Parties which intend to survive the termination of this MOU including but not limited to clause 5 (Confidentiality) above, or any other agreement entered into pursuant to this MOU.

3.0 PROPOSED MODES OF COLLABORATION

VSI and COEP propose to collaborate through one or more of the following:

- a. Mutually discussion and selecting need based and applied research project
- b. Nominating the team
- c. Preparing the time bound programme and selecting the places of visit
- d. Any other appropriate mode of collaboration agreed upon between VSI and COEP as per the mutually agreed scope.

4.0 TECHNICAL AREA OF COLLABORATION

The principal technical area of collaboration between VSI and COEP will be need based as mentioned in Annexure and applied R & D project well suitable for the development of sugar industry.


COEP agrees to work with and coordinate with VSI in the development of their initiatives to improve and expand support to the industry. They also agree to allow VSI and COEP to carry out monitoring and evaluation activities to assess the impact of these activities on participating producers.

5.0 CONFIDENTIALITY

- 5.1 Each party agrees that, at any time, after executing the activities of this MOU, it shall not; disclose any information in relation to these activities or the affairs of business or method of carrying on the business of the other without consent of both parties.
- 5.2 During and thereafter for a period of three years from the date of expiry or termination of this MOU, each Party agrees to consider as confidential all information disclosed by the other Party whether in written or tangible form or, orally disclosed by the disclosing Party ("Confidential information").

3 | Page




Principal
Vasantdada Sugar Institute
Manjari (Bk), Tal. Haveli,
Dist. Pune - 412 307

- 5.3 The obligations above shall not extend to any confidential information for which the receiving party can prove that this information:
- is in the public domain at the time of disclosure or comes within the public domain without fault of the receiving Party;
 - is already known or become known to the receiving Party;
 - is received from a third party having no obligations of confidentiality on the disclosing Party;
 - is independently developed by the receiving Party; or
 - is required to be disclosed by law or court order.

5.4 Each Party may disclose the Confidential Information only on need-to-know basis to its directors, employees, officers, agents (Authorized Personnel) and shall be responsible for actions of such Authorized Personnel;

5.5 Both the Parties will maintain and hold the Confidential Information in the strictest confidence and will not disclose to any third party except after obtaining written consent of the disclosing Party.

5.6 Further, receiving Party shall use Confidential Information of the disclosing Party for the limited purpose of this MOU, as defined under clause 2, and shall under all circumstances preventing unauthorized use of the Confidential Information.

6.0 NON-EXCLUSIVITY

The relationship of the Parties under this MOU shall be non-exclusive and both Parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or collaborations of any kind.


7.0 RELATIONSHIP

Nothing in this MOU shall be construed to make either Party a partner, an agent or legal representative or joint venture of the other for any purpose.

8.0 ASSIGNMENT

It is understood by the Parties herein that this MOU is based on the professional competence and expertise of each Party and hence neither Party shall transfer or assign this MOU, or rights or obligations arising hereunder, either wholly or in part, to any third party.




Principal
Vasantdada Sugar Institute
Manjari (BK), Tal. Haveli,
Dist. Pune - 412 307

9.0 NOTICES

All notices hereunder shall be giving in writing by hand delivery, courier service, email (with confirmation of receipt) or facsimile (with confirmation of receipt) at the addresses set forth below:

COEP:

Attn: Dr. Archana Thosar
☎ : +91 9923334900
☎ : +91 20 25507412
✉ : agt_elec@coep.ac.in

VSI:

Attn: R.A. Chandgude
☎ : +919422252279
☎ : +91 20 26902100
✉ : admin@vsiugar.org.in

10.0 INTELLECTUAL PROPERTY

Any product, tool, framework, solution, or new innovative idea developed by VSI and COEP through this activity will be jointly owned by VSI and COEP.


SIGNED IN DUPLICATE

This MOU is executing in duplicate with each copy being an official version of the agreement and having equal legal validity. This agreement will be administered in accordance with prevailing standard provisions and certifications.



BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.



On behalf of COEP
5, Wellesly Road
Shivajinagar, Pune - 411005

By : 


Name : Dr. B. B. Ahuja
Title : ~~Officiating~~ Director
Date : College of Engineering Pune
Witness : Pune-411005.

1. Prof. M.S. Sutaone 
Deputy Director
2. Prof. A.G. Thosar 
Dean R and D

On behalf of VSI
Manjari (BK), Tal: Haveli,
Dist: Pune : 412 307

By : 


Name : Shri Shivajirao Deshmukh
Title : Director General
Date :
Witness :

1. R A Chandgude 
Technical Advisor and Head
2. P G Patil 
Technical Advisor, Electrical



SIP 000




Principal
Vasantdada Sugar Institute
Manjari (Bk), Tal. Haveli,
Dist. Pune - 412 307

Annexure: Areas of Collaboration

Joint collaboration in need based and applied R & D programs in the following areas:

- Mechanical Engineering
- Electrical and Electronics Engineering
- Instrumentation Engineering
- Materials Engineering, Composites & Metallurgical science
- Conservation of Energy and thermal systems
- Flow Modelling & Optimization


Principal
Vasantdada Sugar Institute
Manjari (Ek), Tal. Haveli,
Dist. Pune - 412 307





महाराष्ट्र MAHARASHTRA

© 2018 ©

AP 519250



MEMORANDUM OF UNDERSTANDING

This Memorandum of Undertaking (MoU) is made on this day, the _____ 2020 between Vasantdada Sugar Institute, Pune herein referred to as VSI having its office at Manjari (Bk.), Tal. Haveli, Dist. Pune, Maharashtra, Pin: 412307 and Nira Bhima SSK Ltd, herein referred to as NBSSKL having its office at Shahajinagar, Tal. Indapur, Dist. Pune. Which expression shall unless repugnant to the context or meaning there of shall mean and include its successor and assigns.

The MoU is signed for the purpose of installation and operation of two anaerobic digesters by NBSSKL on technology developed by VSI, entitled, "Production of biogas from press mud cake (PMC) and/or sugarcane bagasse (SCB)".

1 of 4 P
[Handwritten signatures]


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Department of Alcohol Technology and Bio-fuels, VSI, Pune, is planning to install and operate two anaerobic pilot scale digesters (50000 L capacity each) for "Production of biogas from press-mud cake (PMC) and/or sugarcane bagasse (SCB)" at plant premises of **Nira Bhima SSK Ltd.**

Whereas two anaerobic pilot scale digesters (50000 L capacity each) are used for conducting trials for production of biogas from press mud cake (PMC) and/or sugarcane bagasse (SCB), NBSSKL has given consent vide mail dated 24th September 2020 for installation and operation of above mentioned pilot scale digester in their plant premises.

Nira Bhima SSK Ltd will be involved in this project as a partnering industry.

Responsibilities of Nira Bhima SSK Ltd:

The partnering industry shall;

- a) Provide entire costing for fabrication, design, installation, commissioning and operation of pilot scale anaerobic two digesters.
- b) Provide space required for installation of pilot scale anaerobic two digesters in their premise at a suitable location without any cost.
- c) Provide raw material (SCB, PMC, manpower, water, electricity, steam, laboratory facilities and other materials/utilities required to conduct the trials on pilot scale plant without any cost.
- d) Operate pilot scale plant as per VSI guidelines and submit data collected during commissioning and pilot scale plant operation to VSI.
- e) NBSSKL agrees that any intellectual property, which will be developed through this project and through operation of the pilot scale plant will be solely owned by VSI.
- f) NBSSKL will provide operators and helpers at free of cost for operation of the pilot scale plant.
- g) NBSSKL shall follow the instruction given by VSI, from time to time;
- h) NBSSKL will not conduct such parallel activity which may be prejudicial to the interests of the said project.
- i) NBSSKL will maintain confidentiality of the results obtained through the operation of pilot plant and intellectual property.

2 of 4 Pages


Principal
Vasantdada Sugar Institute
Munshi (Bk), Tal. Haveli,
Dist. Pune - 412 307



- j) NBSSKL will provide assistance for conducting analysis during plant operations.
- k) NBSSKL will allow the staff of VSI and guest of VSI to visit the pilot plant site during its operation period.

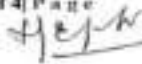
Responsibilities of VSI:

The VSI shall,

- a) Provide conceptual and technical inputs to fabrication and installation of a pilot scale plant at NBSSKL plant premises.
- b) Provide SOPs (standard operating procedure) for operation of pilotscale plant.
- c) Provide norms and guidelines wherever necessary.
- d) Be responsible for the logical and operational aspects of the of the pilotscale plant and component of the said scheme;
- e) Provide timely inputs and any other necessary guidance/information to NBSSKL.
- f) Shall ensure through proper co-ordination and consultation that all theperformance parameters achieved for which the said scheme is designed;
- g) After successful completion ofpilotscale plant trials, if NBSSKL is convinced and interested, this technology can be transferred to NBSSKL without charging any technology transfer fees, in lieu of the cost of installation of commercial scale plant will be borne by NBSSKL.
- h) The pilot scale plant will be the property of NBSSKL and will remain with NBSSKL after trials.
- i) After successful completion of trials on pilot scale plant, NBSSKL shall establish a commercial plant at its own cost and VSI will provide knowhow to NBSSKL at no cost and VSI will have no rights in the profit earned in this commercial scale plant of NBSSKL.
- j) After the successful completion of commercial scale plant trials at NBSSKL premises, VSI shall have sole rights on intellectual property and rights to transfer this technology to other parties.

Both the parties shall have the right to terminate the agreement with prior notice of one month if either of them fails to provide the services successfully as mentioned in the agreement, or violates any of the clauses mentioned in the MOU, or ill use of the technology.

3 of 4 Page




Principal
Vasantdada Sugar Institute
Manjari (Bk), Tal. Haveli,
Dist. Pune - 412 307



Dispute Settlement and Arbitration

In case of any dispute or difference of opinion or interpretation of the MOU arising out of the activities performed under the provisions of this contract or related document not amicably resolved completely by mutual discussion or consultation between the parties within thirty days (30), the entire matter shall be referred to the Administrative Mechanism for Resolution for settlement of commercial disputes.

Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism the party to this contract/agreement/MOU with mutual consent may take recourse of any alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure.

Jurisdiction

Any dispute arising out of the implementation or interpretation of any provisions of this MOU shall be subject to the exclusive jurisdiction of Pune court.

Force Majeure clause, neither party shall be held responsible for non-fulfilment of their respective obligations under the agreement due to the exigency of one or more of the unforeseen events such as but not limited to Acts of God, war, flood, earthquake, strike, lockouts, epidemics, riots, civil commotion etc. provided on the occurrence and cessation of any such events, the party affected thereby shall give a notice in writing to other party within one month of such occurrence or cessation. If the force-majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.

This MoU shall take effect upon signing by both Parties and shall remain in effect for a period of three (3) years from that date unless earlier terminated. The MoU may be renewed at the end of this period by mutual written agreement by both the Parties.

For Nira Bhima SSK Ltd

(Harshwardhan S. Patil, Founder)

For VSI

(Shivajirao Deshmukh, Director General)

Witness

1. Mr. S. G. Genge Patil
2. Mr. K. A. Gaikwad

4 of 4 Pages

Witness

1. Dr. S. V. Patil
2. Dr. K. S. Konde

Principal
Vasantdada Sugar Institute
Munon (Bk.), Tal. Haveli
Dist. Pune - 412 307

