



3.5.1. Number of functional MoUs/linkages with institutions/industries in India and abroad for internship, on-the-job training, project, student/faculty exchange and collaborative research during the last five years

Activities under NDA with Praj Industries Ltd.

Activity scope: Working in various R & D projects such as 1G Ethanol, 2G Ethanol, CBG, Green Hydrogen, sustainable aviation fuel, lactic acid, poly-lactic acid Biobutanol, etc.

Activity details:

- ✓ The activity under this MoU is belongs to the year 2022-2023 after signing of MoU on 21st December 2022.
- ✓ After signing MoU between Vasantdada Sugar Institute (VSI) & Praj Industries Ltd., project was started.
- ✓ In the initial phase of the NDA, Praj want to carry out the validation of PM Stab technology by VSI.
- ✓ Following objectives will be undertaken
 1. Treatment of press mud cake with PM Stab as “Experiment” set. The “Control” set will be press mud cake without treatment of PM Stab.
 2. Such type of press mud cake samples will be collected from 2 to 3 sugar factories and will be treated with PM Stab.
 3. The storability study will be carried out for 12 months at VSI as well as at PIL.
- ✓ Other communicated with Mr. Vaibhav Tiwari, General Manager, Praj Industries Ltd., related to project like report sending, meeting, etc. is attached with this report.

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

From: **Vaibhav Tiwari** <VaibhavTiwari@praj.net>

Date: Tue, Jan 3, 2023 at 1:20 PM

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

To: kakasaheb.konde@gmail.com <kakasaheb.konde@gmail.com>

Cc: Atul Mulay <AtulMulay@praj.net>, Basavaraj C <BasavarajCR@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,

These 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. Basavraj (Mb. No.: 9890900179),

Look forward to get details from you soon.

Thanks and Regards,

Vaibhav Tiwari

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
Manjari (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
Manjari (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 19, 2022 at 3:05 PM

To: Shuvashish Behera <behera.shuvashish@gmail.com>, Raghunath Burase <raghunathburase@gmail.com>, Pranav Nikam <nikampranav@yahoo.in>

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

From: **Vaibhav Tiwari** <VaibhavTiwari@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: Atul Mulay <AtulMulay@praj.net>, Basavaraj C <BasavarajCR@praj.net>

Dear Sir

Once again thank you for your visit and detail 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-Stab product. This will be very much similar to what we did in case of Bio-Syrup.

But our Mr. Basavaraj- Product Manager (CBG) will send you detail scope of same,

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,

Vaibhav Tiwari

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



From: [Sudarshan Kendre](#)

Sent: 13 December 2022 09:15

To: kakasaheb.konde@gmail.com; skadupatil@gmail.com

Cc: [Uday Kulkarni](#); [Vaibhav Tiwari](#); [Atul Mulay](#); [Pramod Kumbhar](#)

Subject: Minutes of Meeting between Praj and VSI dated 9th 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 (Matrix) 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. [Vaibhav 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, Bhumkar Chowk-Hinjewadi Road,
Hinjewadi, Pune-411057
Tel: +91-20-22941000/71802000
Cell no: +91-9890900181


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

