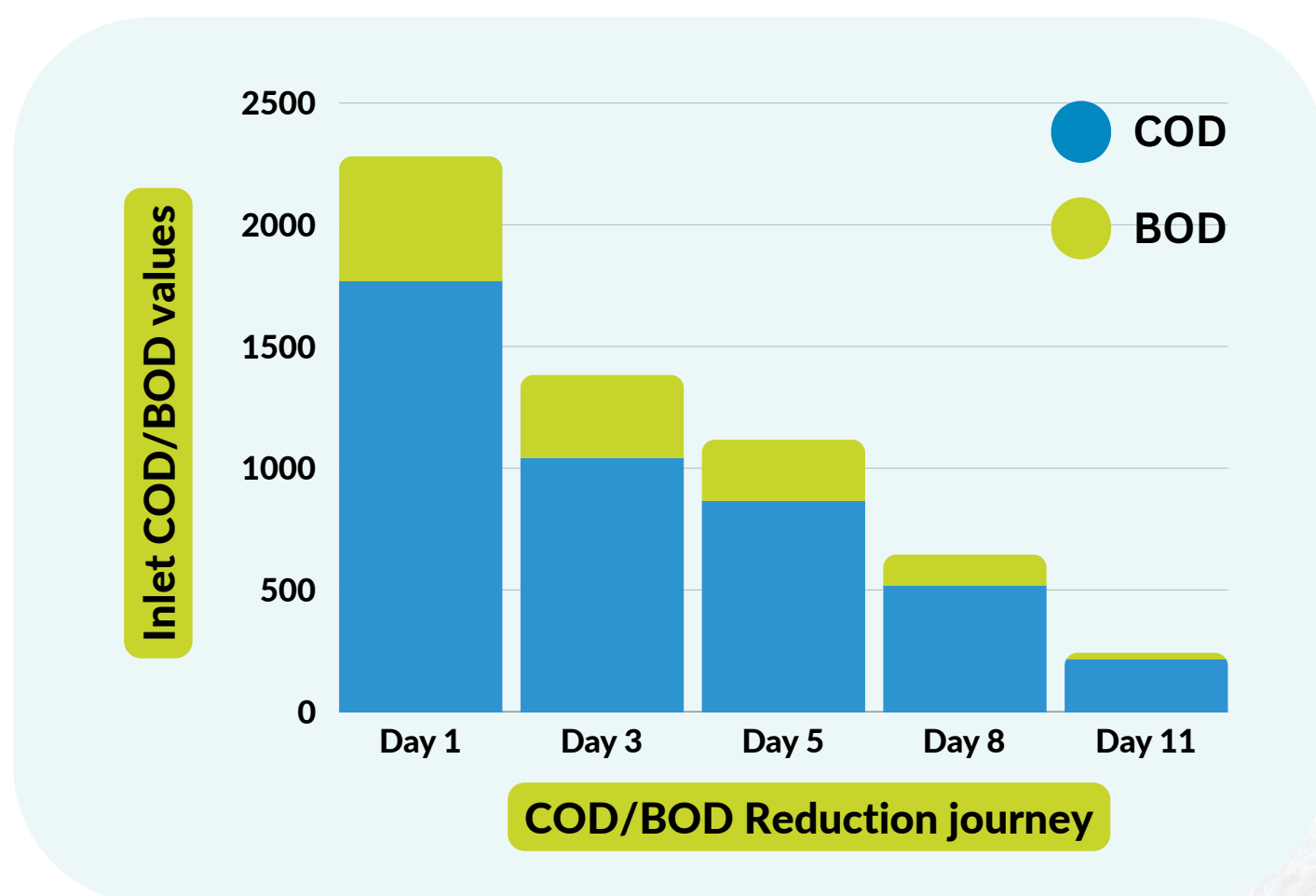




PureBact Bacteria Culture: Revolutionizing Pharmaceutical Effluent Treatment (CASE STUDY)

The treatment of pharmaceutical effluent is no easy feat, given the diverse and resistant nature of its organic compounds. **Our innovative bacteria culture, PureBact, stands as a beacon of sustainable biological practices.** Engineered to flourish in the challenging pharmaceutical environment, it efficiently consumes organics, providing a remarkably effective and eco-friendly solution. Here is an case study of our trials at a customer's site:



Readings after 11 days of treatment

Parameters	Unit	Inlet Value	Post treatment value
COD	mg/L	1771	216
BOD	mg/L	510	26
Ammonical Nitrogen	mg/L	15.12	0

BENEFITS TO THE COMPANY

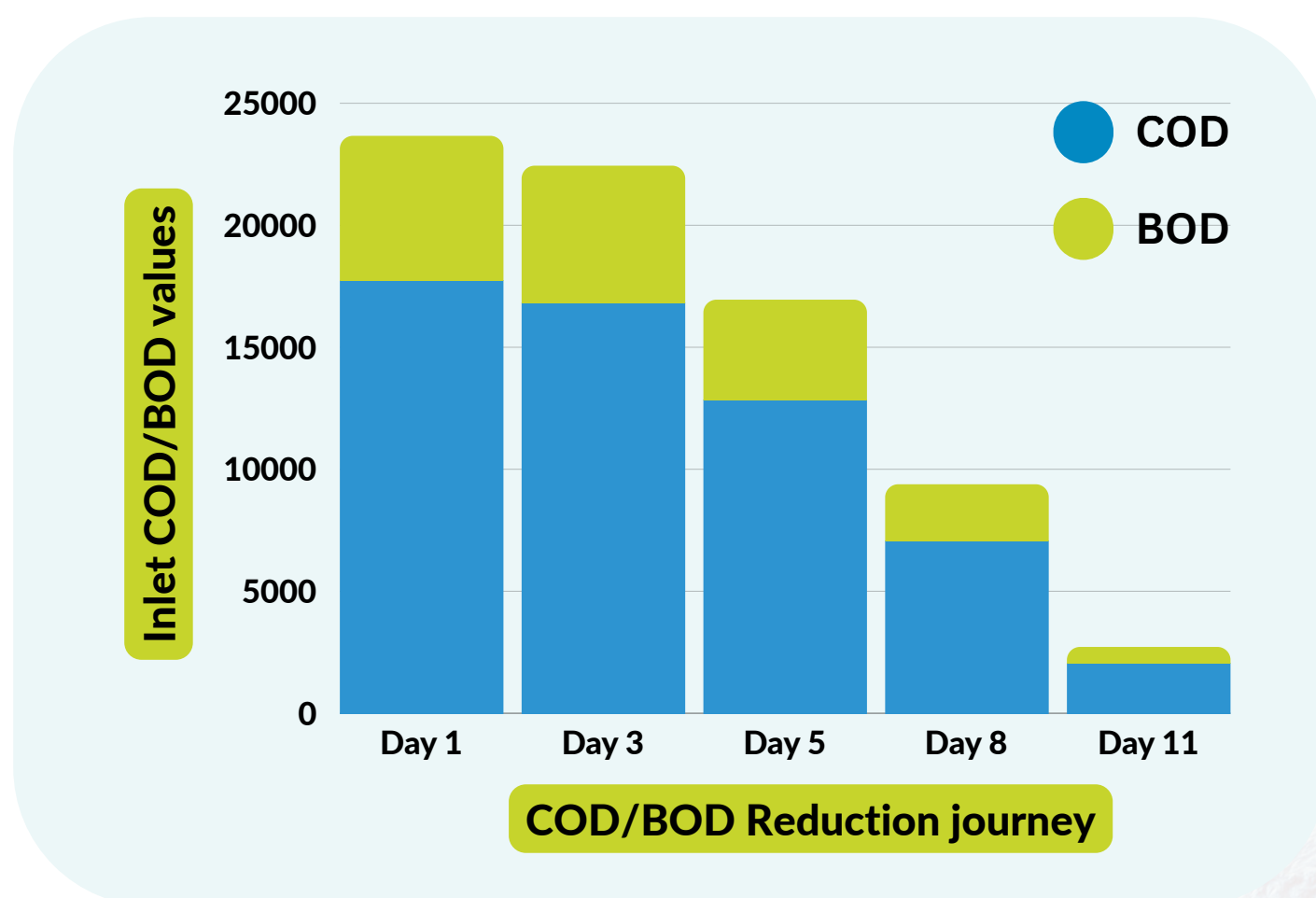
- Significant **COD/BOD** reduction
- Nil reading of **Ammonical Nitrogen**
- **Breakdown of complex solvents** and other pharmaceutical components
- Efficient **MLSS/MLVSS** formation
- Stabilised shock load



PureBact-100
For the **Pharmaceutical Industry**

PureBact Bacteria Culture: Revolutionizing Chemical Industry Effluent Treatment (CASE STUDY)

The treatment of chemical industry effluent is extremely challenging, given the complex nature of organic compounds which make for an uninhabitable environment for bacteria to thrive. **Our innovative bacteria culture, PureBact**, is engineered to flourish in the challenging chemical industry environment, as it efficiently consumes organics, providing a remarkably effective and eco-friendly solution. Here is an case study of our trials at a customer's site:



Readings after 11 days of treatment

Parameters	Unit	Inlet Value	Post treatment value
COD	mg/L	17741	2056
BOD	mg/L	5924	662
Ammonical Nitrogen	mg/L	216	29

BENEFITS TO THE COMPANY

- Significant **COD/BOD breakdown**
- Outstanding **Ammonical Nitrogen reduction**
- **Breakdown of complex solvents** and other chemical components
- Efficient **MLSS/MLVSS** formation
- Stabilised shock load



PureBact-100
For the **Chemical Industry**

PureBact Microbial Culture: Revolutionizing Effluent Treatment in the Sugar Industry (CASE STUDY)

Background:

A sugar mill from Aurangabad, Maharashtra was facing some serious issues in recommissioning their ETP. The sugar industry is a very seasonal industry and their factories are shutdown for 6 months in a year. During this time, the ETP is not operational.

Recommissioning a Sugar mill ETP after a long off-season can be quite challenging.

This particular sugar mill was facing issues - Their aeration tank effluent turned black in colour due to pH & effluent flow fluctuations.

Initial Plant observations:

- Aeration tank capacity - 420 m³
- Flow 15 m³/hr
- No. of diffusers - 78 air diffusers
- COD of inlet effluent - 3000 ppm
- Aeration tank effluent colour was black and filled till 100% capacity
- Inlet effluent pH - 4.25
- Aeration tank pH - 7.1
- Settled sludge volume(SSV) - Below 50 ml.

Our Microbial Solution:

- On Day 1, we emptied 60% of effluent (approximately 250 m³) effluent from the aeration tank.
- Seeding of 500 ltr of cow dung slurry was done in the aeration tank. 250 ltr of molasses was also added (1% solution).
- Nutrients such as DAP & Urea were added 5 kg each.
- **Assimilated 200 ltr PureBact bioculture was added to the aeration tank (12 kg Purebact-10 was acclimatised in 100 ltr water & 100 ltr Primary clarifier outlet for 4 days with continuous aeration).**
- The same process of adding nutrients along with the 200 ltr acclimatised PureBact soliton was carried out for the next 3 days.
- **Colour of the aeration tank turned black to light brown.**
- The SSV gradually started increasing and we obtained an SSV of 160 ml on Day 4.
- We started adding the primary outlet into the aeration tank from Day 4.
- Primary outlet is constantly added with a daily gradual increase till the aeration tank is filled to the full capacity.

Results:

- Within 8 days of dosing PureBact along with the seeding process, the effluent colour in the aeration tank was restored to a desirable brown colour.
- **This indicated a significant reduction in the overall COD/BOD as well as a healthy MLSS/MLVSS formation.**
- The ETP was recommissioned successfully and was able to keep up with the inlet effluent without any anomalies.



PureBact-10
For the Sugar Industry

CONCLUSION

An exhaustive on site trials at the sugar mill helped us achieve the desired results for our customer. Our team subsequently shared the dosage recommendations as well as the Standard Operating Procedure(SOP) to follow every time they want to recommission the ETP. The sugar mill now has been using our culture for the past 2 years without any deviations.

Photographic representation of site performance:



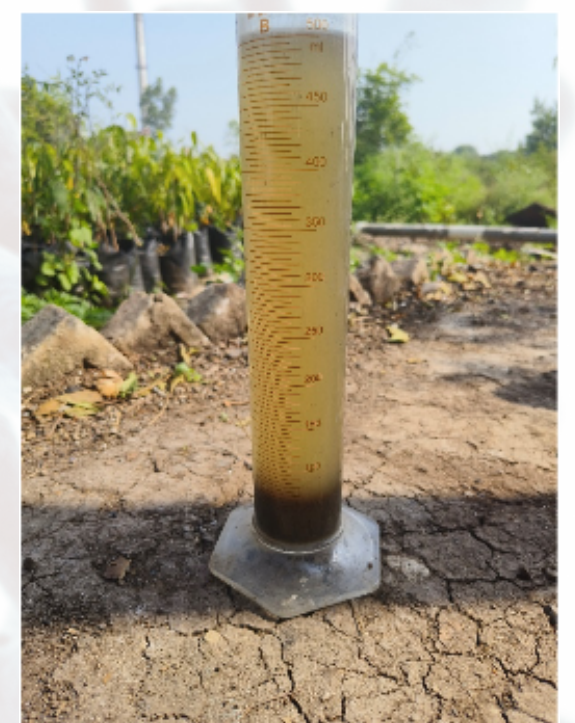
Aeration Tank - Day 1
Black inlet effluent



Aeration Tank - Day 7
Brown inlet effluent



SSV- Day 2
Approximately 50 ml



SSV- Day 2
Approximately 120 ml

Pure Water Enterprises Pvt Ltd.

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