



MICRODYN BIO-CEL® MBR Process Questionnaire

General Project Data

Project Name:
OEM:
End User:
Project Phase:
Project type:
Expected start-up date of the project:

1. Source of feed flow:
Municipal
Commercial (public use)
Industrial => Type:
% of each source (in case of mixed industrial wastewater):

2. Is there mechanical / chemical pre-treatment upstream to MBR (please explain)?

3. When one/all filtration line(s) are out of service, is there enough buffer capacity for the required duration to hold the inflow upstream to the filtration step (1 hour / week), for module inspections (max. 1 day, once or twice per year)?

4. Must the permeate production be non-stop (24 h, 7 days) due to further use of it (e.g use in production or as feed to RO)?

5. Hydraulic load to filtration step:
Please give ONLY the values after equalization tank.

- Annual daily average flow, Qd:
Hourly peak flow, Qh,max (dry weather, no mixture with rain water):
Hourly peak flow, Qh,max (wet weather, applicable for municipal STP with combined sewer system):
Maximum duration of Peak flow (per day and week):
Maximum duration of Rain flow (municipal mixed sewer):

Wastewater temperature * (°C):
Minimum temp. Summer:
Maximum temp. Summer:
Minimum temp. Winter:
Maximum temp. Winter:

* If there is a table for long-term temperature regime available, please attached it to your inquiry.

6. Is there any antifoam / chemical addition in biological tank (if yes, please explain)?

7. The composition of flow to biological tank: (if a water analysis is available, please attach it)

Table with 7 columns: Parameter, value, Unit, Parameter, value, Unit, Other Unit. Rows include COD, BOD5, Total Nitrogen, Ammonia NH4-N, Nitrate NO3-N, Phosphorus (as PO4-P), Alkalinity (as CaCO3), Solvents_Cationic, Suspended Solids, FOG - Free, FOG - Emulsified, Salinity TDS, Chloride Cl-, TOC, Conductivity, Solvents_Anionic.

8. Required effluent quality:
mg/L
mg/L

9. The **aim of the filtration (use of permeate)**:

- | | |
|--|--|
| <input type="checkbox"/> Irrigation | <input type="checkbox"/> Toilet flushing |
| <input type="checkbox"/> Discharge to surface waters | <input type="checkbox"/> Reuse in production |
| <input type="checkbox"/> Pretreatment before RO | |
-

10. Further **details / tender specifications**:

- Which **automation level** is expected for the plant?
 - High** automation level => all treatment steps including periodic chemical cleaning of MBR system will be 100% operated by **PLC**.
 - Low** automation level => the plant is partly/mostly operated manually. The periodic chemical cleaning of MBR system will be done **manually** by staff.
 - Is the **design flux** defined by the tender? (please specify peak or average flux)
-

- Is the **number of filtration lines** fixed by the tender or project demands?
-

- Are there any **existing plans and drawings** (P&ID, GA, etc.) of this plant? If yes, please attach.
-

- Additional Information:
-
-
-