



A/S "SMILTĒNES PIENS"

# Waste water treatment in JSC «Smiltēnes piens»

Executive director Karīna Šteinberga

# About company





# We produce



Cheese

Deserts

Cream, sour cream, cottage cheese

They protein drinks

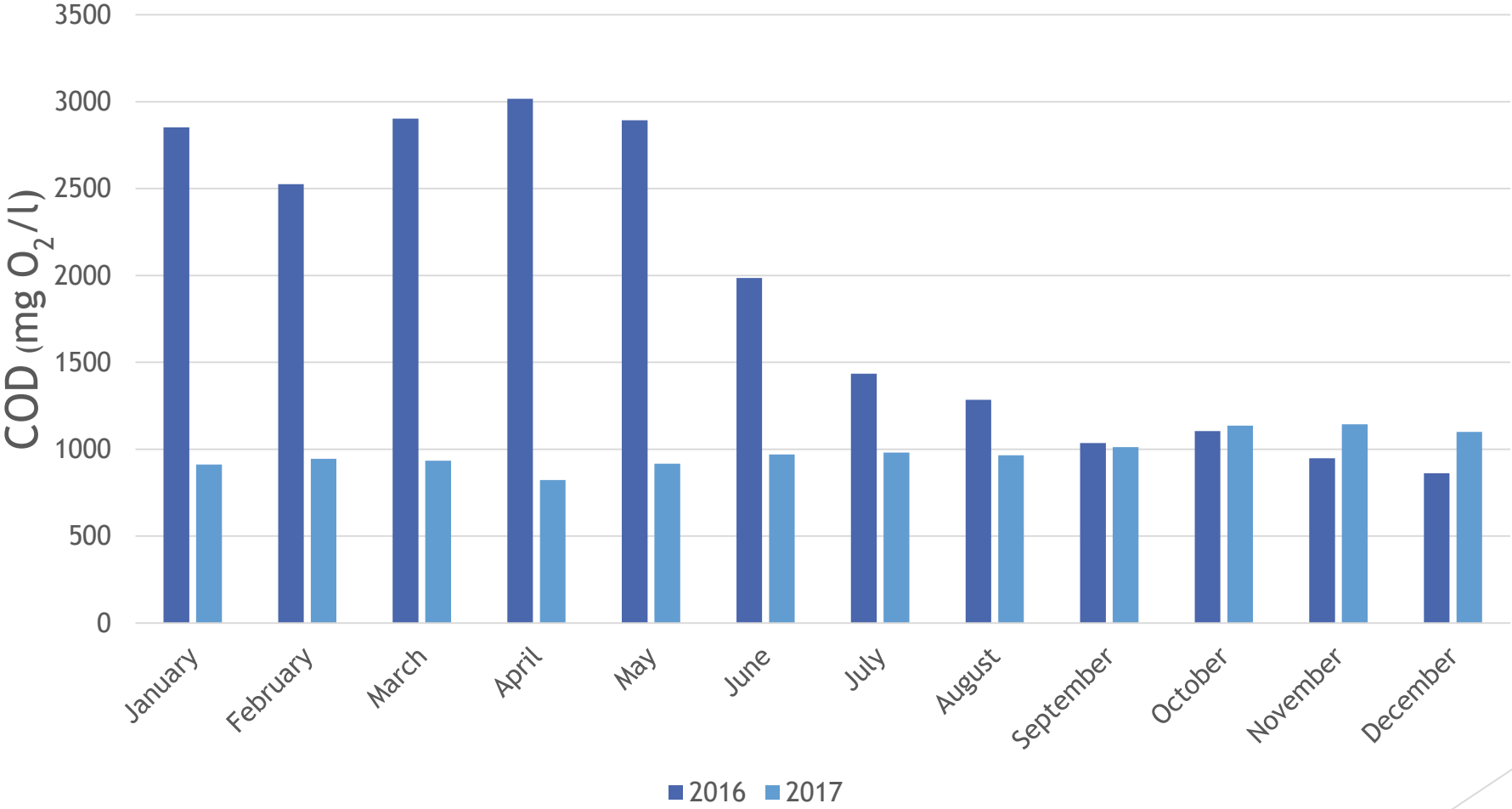
# Before change of regulation

- All wastewater were redirected to Smiltenes waste water treatment
- As the company expanded, the capacity of treatment plants became insufficient
- Fines - if exceeded the norms of regulation - was on both measures BOP and COD
- AS Smiltenes piens were one of initiators of changes in regulation

# Reducing pollution

- Collection of samples at production sites to identify the major source of contamination
- Collection of first flushing waters, with the highest COD to reduce average COD level in waste waters
- Regular everyday measures of COD to control level of pollution
- All these actions led to average COD measure around/under 1000 mg O<sub>2</sub>/l without pre-treatment

# Average COD level before wastewater pre-treatment



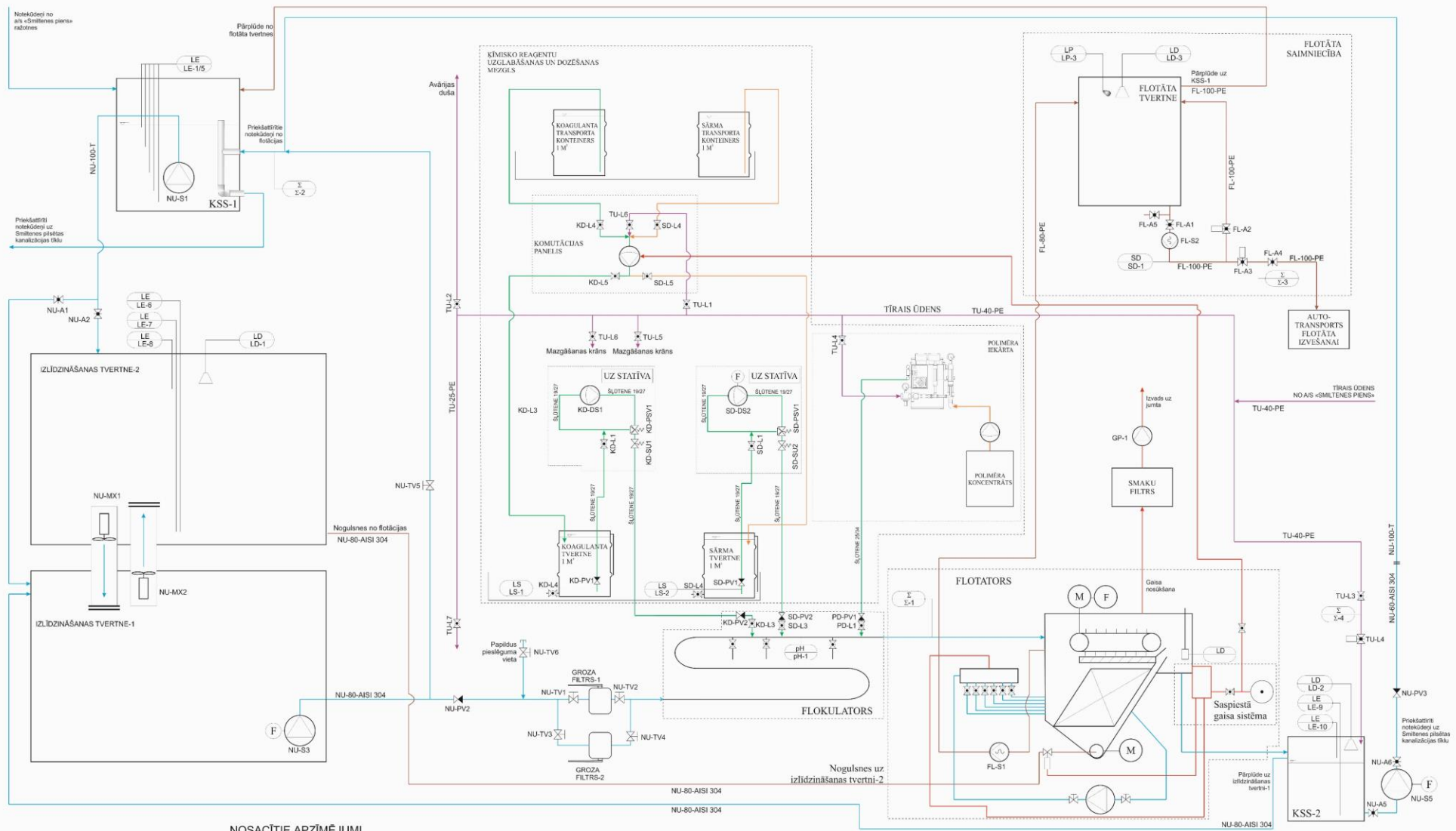
# At this moment

1. Waste water pre-treatment system with flocculation from February 2018





# A/s «Smiltenes piens» notekūdeņu priekšattīršanas ietaises. Tehnoloģiskā shēma



## NOSACĪTIE APZĪMĒJUMI

- |  |  |   |
|--|--|---|
| <b>Caurulvadi</b><br>NU-100-AISI 304<br>Caurulvada materiāls<br>Nominālās diametrs<br>Caurulvada apzīmējums, kur<br>NU = Notekūdeņi<br>K = šķīdinātājs<br>G = Gaisis | <b>Aizbīdņi un vārsti</b><br>Nažveida aizbīdņs<br>Pretvārst<br>Lodveida krāns<br>Pārspiediena vārsts<br>Spiediena uzturēšanas vārsts<br>Uzskāšanas mezģis ar filtru, pretvārstu un līmeņa slēdzi<br>Tauriņvārsts | <b>Mērierīces</b><br>LS LS-1 Līmeņa slēdži<br>LP LP-1 Līmeņa Pludži<br>ST ST-1 Spiediena transmiēri<br>pH pH-1 pH Elektros<br>SI SI-1 Manometri<br>Σ Σ-1 Plūsmas mēritāji |
| <b>Sūkņi</b><br>Notekūdeņu sūknis<br>Notekūdeņu sūknis ar frekvences pārveidotāju<br>Datorsūknis<br>Sņeka sūknis   |  |   |

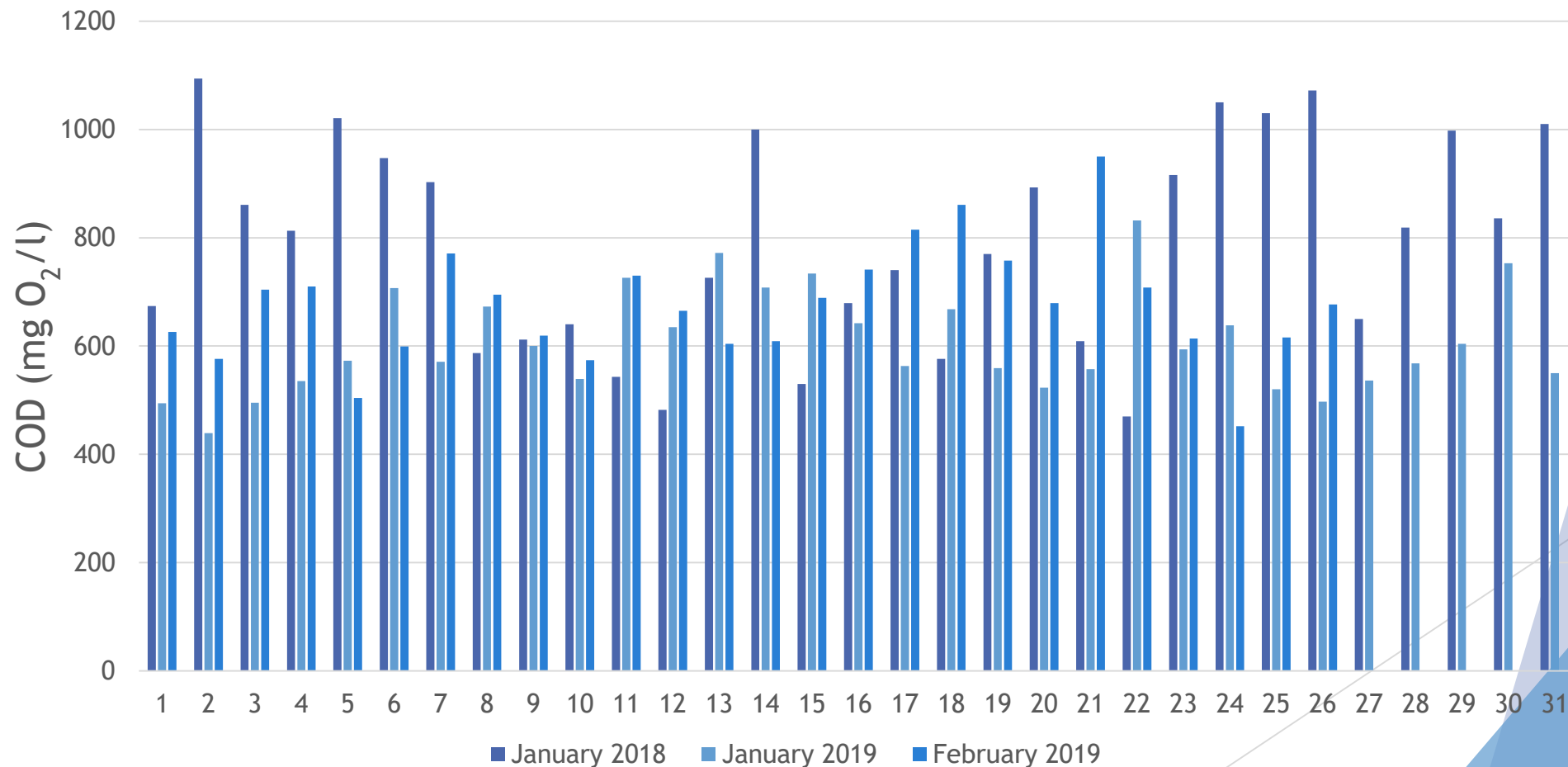
Pasūtītājs:	A/s «Smiltene piens» Māmiņu iela 2, Smiltene, Smiltene nov., LV-4729	Līguma Nr. 2-33/16-60
Objekts:	Rūbošanas notekūdeņu priekšattīršanas iekārtu projektēšana, piegāde, montāža, pabeigšana un iereģistrācija, kā arī ar iekārtu uzstādīšanu saistītie būvdarbi a/s Smiltene piens	
Nozars:	TN	Stadija Lapa Lapas I I I
Rasējums:	Procesa un instrumentācijas diagramma, V-06	Mērogs: b/m
		Faila nosaukums: 2-33_16-60_Smiltene piens_PID_V06



# At this moment

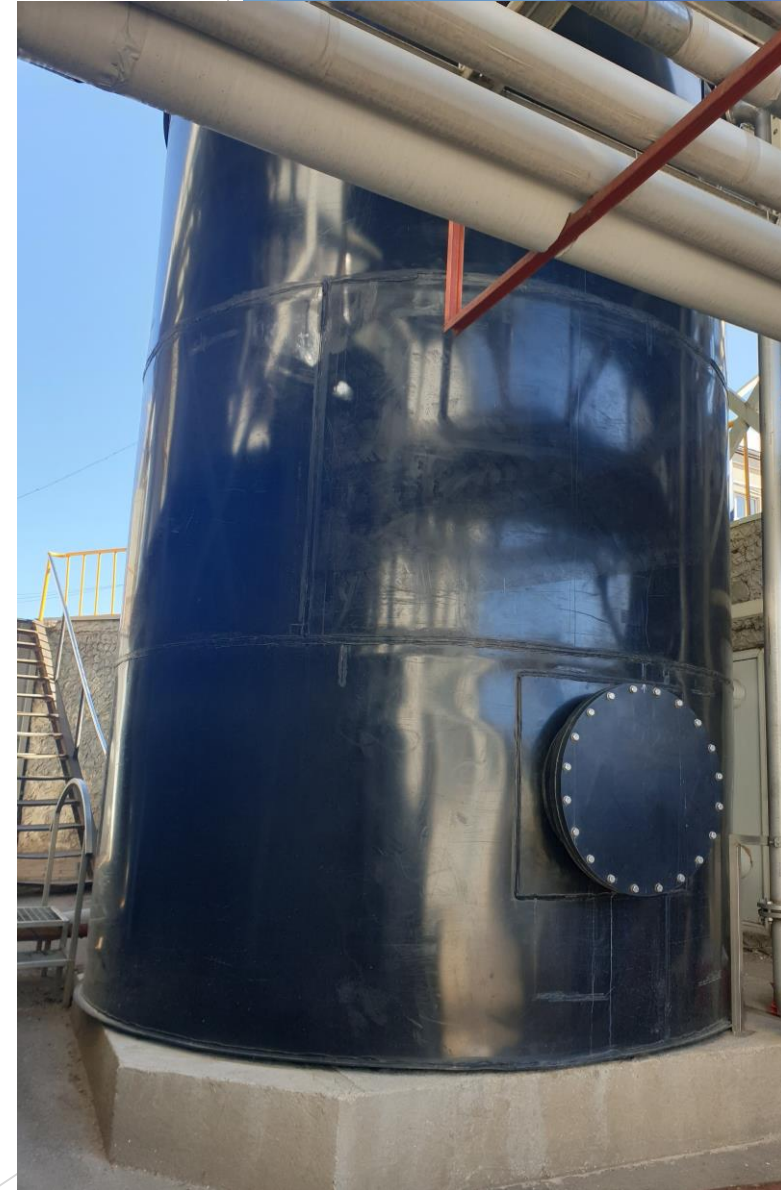
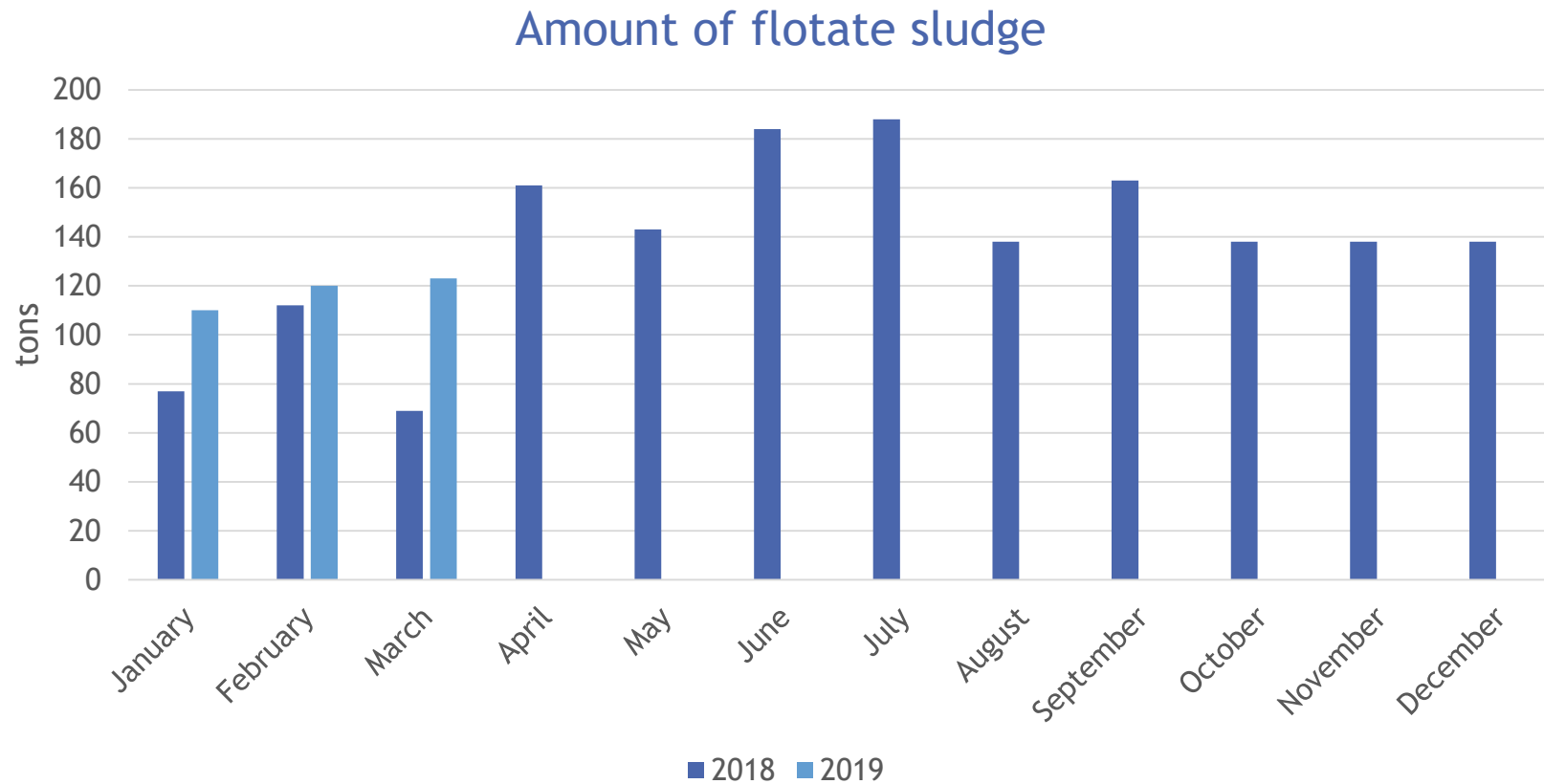
2. Sample collecting - automatically every hour to collect average day sample for measuring COD level

COD level in every day analysis (average)



# At this moment

## 3. Flotate sludge - to producers of biogas



# At this moment

## 4. Wastewater composition after treatment

Parameter	Result
COD	405 mg O <sub>2</sub> /l
BOP (BOP5)	241 mg O <sub>2</sub> /l
Total phosphorus	0,49 mg/L
Total nitrogen	6,72 mg/L
pH	7,2



# Internal monitoring of industrial waste water quality

- Regular monitoring of the treatment plant
- Internal monitoring for control of COD level in waste waters 2 times a day
- Allows us response faster if the results of analysis are out of allowed levels. For example, report to city waste water treatment for possible waste waters with increased level of COD



Thank you for your attention!

[www.smiltenespiens.lv](http://www.smiltenespiens.lv)