

Winary waste waters

Water management requirements

DI Günther Konheisner

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Cleaning water

- winebottles
- vessels, tanks
- working machines
- takeover area

→ organic loaded → (neutralize) → discharge into communal sewage system



Preservation

- preserving the vessels and machines with sulfuric acid or other acids and lyes
 - acid / basic → danger of corrosion of the sewer → neutralize → discharge into communal sewage system



Heat exchange water

→ non organic loaded → (recirculate) →
discharge into waters
(no discharge into communal sewer)

Twinning Project MK 11 IB EN 01 R
Strengthening the administrative capacity on the central and
local level for the transposition and implementation of the new
Industrial Emission Directive 2010/75/EU



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Bottling machines

- Cleaning water from washing bottles
 - Overflow water
- organic loaded, (basic) → (neutralize) → discharge into communal sewage system



No discharge

- **Solides as stams, grape skins, cores**

→ deposits in sewer

→ bring back into vineyards in large areas or compost it

- **Fermentation sludge**

→ very high organic loaded! → no discharge into communal sewing system → bring back into vineyards in large areas or bring to biogas plants

Waste water ingredients

- sugar, protein, alcohol → **carbon**
- less nitrogen and phosphorus

→ discharge into communal sewer

→ treatment into own wastewater treatment plant will not be recommended because of not balanced nutrient relation



Environment necessities

- Bring out all the solids (stems, grape skins, cores) and all the sludge from fermentation back into the vineyards!
- Only the wastewater from cleaning the vessels, tanks, bottles, machines ... can be discharged into the communal sewage system



Key figures (1)

- 1 ha vineyard → 7.000 kg grapes
→ 5.000 litres wine → 20 m³ waste water

**All specifications only in requirement by holding back the fermentation-sludge!
Otherwise the organic load is up to 10 times!**

- Grapes from 1 ha vineyard:
 - 5 – 10 population equivalents per day
 - 300 – 600 g BOD₅ per day
 - 150 – 300 litres waste water per day



Key figures (2)

- 1.000 kg purchased grapes
 - 0,6 – 1,2 population equivalents per day
 - 35 – 75 g BOD₅ per day
 - 20 litres waste water per day
- 1.000 litres purchased wine
 - 0,15 population equivalents per day
 - 9 g BOD₅ per day
 - 15 litres waste water per day



Thank you for your attention!

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