

14 September 2001

Summary of betaine toxicity, biodegradability and oxygen demand tests

1) Acute fish toxicity

SAR Estimates of Toxicity / U.S. Environmental Protection Agency Washington DC) 10.12.1997

Estimation of the octanol/water -partition coefficient:

Log Kow -4,93

Fish 96 h LC50 (mortality) >1000 mg/l

= No Effects Expected in a Saturated Solution

Betaine is used in fish foods and occurs in fish tissue!

2) Daphnia toxicity

SAR Estimates of Toxicity / U.S. Environmental Protection Agency (Washington DC) 10.12.1997

Estimation of the octanol/water -partition coefficient:

Log Kow -4,93

Daphnid 96 h LC50 (mortality) >1000 mg/l

= No Effects Expected in a Saturated Solution

Betaine is used in fish foods and occurs in fish tissue !

3) Ready biodegradability after 28 days

EMPA study test report 129'310

Determination of the mineralisation (OECD 301 B) 13.10.1997

Result: Mineralisation after 28 day was 88 %

It is usual to declare substances as "easily biodegradable", when the mineralisation after biodegradation time of 28 days attains > 60 %.

4) Oxygen demand

BOD5 = Biological Oxygen Demand

1000 mg O₂ / 1 g betaine

COD = Chemical Oxygen Demand

70 - 100 mg O₂ / 1 g betaine