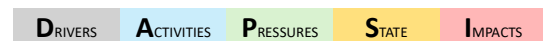


Bemotrizinol

(CAS numbers: e.g. 187393-00-6, EC numbers: 606-111-6, 425-950-7
/ Entry number in HELCOM list of substances of concern: 5)

General sectors: Industry and commercial products, personal care product



Why a HELCOM concern?

Main evidence

- P** Approximately **0.7-3 tonnes of Bemotrizinol** are estimated to enter the Baltic Sea every year via Wastewater Treatment Plants (WWTPs) emissions. Given that the substance is **suspect as very toxic**³, current inputs are likely significant, in terms of risk they pose for the Baltic Sea and its ecosystem services. The data on WWTP discharges (2010-2019) originates from the study of Undeman et al. (2022)².
- I** Current inputs to the Baltic Sea indicate potential negative impacts at least on pelagic biota.

Overall assessment

When assessing current levels in the Baltic Sea (no relevant measurement data), current inputs, and the severity of the relevant toxicity mechanism, Bemotrizinol scores **30-100/100** in the scale established for assessing the overall risk for impacts/threat for the Baltic Sea, where 50 indicates concern, 100 extreme risk, and the width of the span outlines the uncertainty in the assessment.

Facts relevant for management considerations

Causal chain and pathways

A The EU REACH registered volume for Bemotrizinol is 1,000 – 10,000 t/y³. Registered uses consumer uses (personal care products, including sunscreen/ daily cream application, fragrances), professional uses (application in a solarium or cancer treatment), and industrial uses (formulation)⁴. According to the SPIN database, for the period 2017-2021, in Sweden and Denmark the substance was reported in total amounts up to tonnage bands of 1.5 t/y – 150 t/y and 0 – 88 kg/y respectively⁴. The substance is authorised in the EU for use in cosmetic products (relevant functions: hair conditioning, light stabilizer, UV absorber, UV filter)⁵.

S ? *In order to further improve the evaluation of the risk, relevant aspects to consider are a review of the relevant toxicity thresholds (expected relevant matrices) and further marine monitoring or modelling for predicted environmental concentrations based on estimated inputs. Derivation of time-trends, based on the available inputs information, would also be of use.*

Relevant policies (existing or planned measures)

M (on A/P) • Bemotrizinol is **listed in the EU Cosmetics Regulation (EC) 1223/2009 (regulated as a UV filter in cosmetic products in a concentration up to 10 %)**.

References:

1. 2. 3. 4. 5.

[Note: Listing of detailed references will be provided in an upcoming update of the fact sheet – for a listing of the most common references among the different substances see the section at the end of the consolidated document which includes all the fact sheets]