

Petidin Meda

 MR_{xs} EF

Meda

Injektionsvätska, lösning 50 mg/ml
(Injektionsvätskan har pH ca 5.)



Narkotikaklass: II - Narkotika med medicinsk användning

Särskilt läkemedel

Morfinliknande analgetikum

Aktiv substans:

Petidin

ATC-kod:

N02AB02

Läkemedel från Meda omfattas av Läkemedelsförsäkringen.

Miljöpåverkan

Petidin

Miljörisk: Risk för miljöpåverkan av petidin kan inte uteslutas då ekotoxikologiska data saknas.

Nedbrytning: Det kan inte uteslutas att petidin är persistent, då data saknas.

Bioackumulering: Petidin har låg potential att bioackumuleras.

Detaljerad miljöinformation

Environmental Risk Classification

Predicted Environmental Concentration (PEC)

PEC is calculated according to the following formula:

$$\text{PEC}(\mu\text{g/L}) = (A \cdot 10^9 \cdot (100 - R)) / (365 \cdot P \cdot V \cdot D \cdot 100) = 1.37 \cdot 10^{-6} \cdot A \cdot (100 - R)$$

$$\text{PEC} = 4.473 \cdot 10^{-5} \mu\text{g/L}$$

Where:

A = 0.3265 kg (total sold amount API of pethidine hydrochloride in Sweden year 2023, data from IQVIA) (Ref. 1)

R = removal rate = 0% (no data available)

P = number of inhabitants in Sweden = $10 \cdot 10^6$

V (L/day) = volume of waste water per capita and day = 200 (ECHA default) (Ref. 2)

D = factor for dilution of waste water by surface water flow = 10 (ECHA default) (Ref. 2)

According to the European Medicines Agency guideline on environmental risk assessment of medicinal products (EMA/CHMP/SWP/4447/00), use of pethidine is unlikely to represent a risk for the environment, because the predicted environmental concentration (PEC) is below the action limit $0.01 \mu\text{g/L}$.

Ecotoxicological studies

No ecotoxicological data available.

Degradation

No degradation data available.

Bioaccumulation

An experimentally derived $\text{Log } P_{\text{ow}}$ of 2.72 (unknown method) (Ref. 3) indicates that pethidine has low potential for bioaccumulation.

$\text{Log } P_{\text{ow}} < 4$ which justifies use of the phrase "Pethidine has low potential for bioaccumulation".

References:

1. Data from IQVIA "Consumption assessment in kg for input to environmental classification - updated 2024 (data 2023)".
2. ECHA, European Chemicals Agency. Guidance on information requirements and chemical safety assessment. Ver 2.1, 2011
3. Sangster (1994), ChemID+, US National Library of Medicine, National Institutes of Health