

Migration study of CHIMASSORB 2020 in natural waters: fresh water and sea water

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Description

Migration study of CHIMASSORB 2020 in natural waters: fresh water and sea water. The migration of a high molar mass hindered amine stabilizer, CHIMASSORB 2020, was followed in three low-density polyethylene films of 100 μm thickness, containing respectively 2500 mg/kg, 5000 mg/kg and 7500 mg/kg, in total immersion in fresh water and in sea water (Mediterranean sea) at room temperature (23 degrees C) for 54 months. The quantitative monitoring of the concentration of the stabilizer in the film by Fourier Transform Infrared (FTIR) spectroscopy has revealed low percentages of migration with amounts not exceeding 5% w/w. Thus, the quantities released are, in the three formulations, below the Specific Migration Limit (SML = 5mg/kg). Hence, the use of this stabilizer for a long contact time with natural waters becomes without risk for human and for his aquatic environment even for doses up to 7500 mg/kg ...