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Oxabiphor acid

http://www.lumiprobe.com/p/oxabiphor-phosphonic-acid

Oxabiphor (Oxabifor) acid is a chelator for the lanthanide tetraphosphonate complexes synthesis. Oxabiphor (oxa-bis-ethylenenitrile tetra(methylene phosphonic acid); oxybis(ethylene)bis(nitrilobismethylene)tetrakisphosphonic acid) is useful for the radionuclides delivery due to complexation properties [1].

Supplied as a dihydrate and meets the quality requirements:

Quality criteria (method)

Reference value

Authenticity (¹H NMR) meets the requirements

Key product content (¹H NMR) not less than 98 %

Acceptable impurity (¹H NMR) 2-(2-Aminoethoxy)ethylamine – no more than 0.3 %

Residual solvents class 1,2 (¹H NMR) visual absence of signals in the spectrum (less than 0.1 %)

Authenticity (³¹P NMR) meets the requirements

Acceptable impurity (³¹P NMR) Trisphosphonates – no more than 1.0 %

Acceptable impurity (³¹P NMR) Hydroxymethylphosphonic acid – no more than 0.5 %

Chloride ion content (Reverse no more than 0.2 %

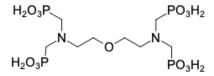
precipitation titration)

Chemical impurities (Atomic emission spectroscopy)

no more than (ug/g): As - 50; Ba - 5; Be - 0,25; Bi - 5; Cd - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Cr - 7; Cu - 2,5; Fe - 15; Hg - 125; Mn - 0,5; Mo - 5; Ni - 50; Mn - 0,5; Mn - 0,5;

5; Pb - 5; Sn - 5; Sb - 50; Te - 50; Zn - 125; Al - 50

[1] Maruk A. et al. Synthesis, Complexation Properties, and Evaluation of New Aminodiphosphonic Acids as Vector Molecules for 68Ga Radiopharmaceuticals. Molecules. 2021. 26(8):2357. doi:10.3390/molecules26082357



Structure of Oxabiphor acid

General properties

Appearance: white powder

Molecular 480.18

weight:

Molecular $C_8H_{24}N_2O_{13}P_4$

formula:

IUPAC name: 2-[7-Phosphono-6-(phosphonomethyl)-3-oxa-6-azaheptyl]-2-aza-1,3-propanediylbis(phosphonic acid)

Quality control: NMR ¹H (98+%)

Storage 24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks.

conditions: Desiccate.

Legal Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, statement: drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including,

without limitation in the diameter, no express of implied authorized to use for any other purpose, filed

without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.