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Oxabiphor acid

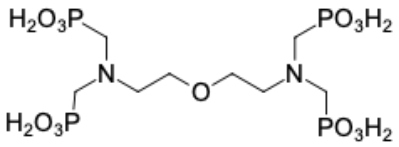
http://www.lumiprobe.com/p/oxabiphor-phosphonic-acid

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 (^{1}H NMR)	meets the requirements
Key product content (^{1}H NMR)	not less than 98 %
Acceptable impurity (^{1}H NMR)	2-(2-Aminoethoxy)ethylamine – no more than 0.3 %
Residual solvents class 1,2 (^{1}H NMR)	visual absence of signals in the spectrum (less than 0.1 %)
Authenticity (^{31}P NMR)	meets the requirements
Acceptable impurity (^{31}P NMR)	Trisphosphonates – no more than 1.0 %
Acceptable impurity (^{31}P NMR)	Hydroxymethylphosphonic acid – no more than 0.5 %
Chloride ion content (Reverse precipitation titration)	no more than 0.2 %
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 – 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 weight:	480.18
Molecular formula:	$C_8H_{24}N_2O_{13}P_4$
IUPAC name:	2-[7-Phosphono-6-(phosphonomethyl)-3-oxa-6-azaheptyl]-2-aza-1,3-propanediylbis(phosphonic acid)
Quality control:	NMR ^{1}H (98+%)
Storage conditions:	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.