

Title (en)

Column system for creating a solution with high specific activity

Title (de)

Säulensystem zur Herstellung einer Lösung mit hoher spezifischer Aktivität

Title (fr)

Système de colonnes destiné à la production d'une solution ayant une activité spécifique élevée

Publication

EP 1933331 A3 20100414 (DE)

Application

EP 07024128 A 20071212

Priority

DE 102006058542 A 20061212

Abstract (en)

[origin: EP1933331A2] The procedure for the production of radioactive daughter nuclide for medical applications, comprises allocating a generator with a chromatography column (3) having a stationary phase and an adsorbed mother nuclide at the stationary phase, eluting the daughter nuclides from the column with 0.9% of sodium chloride solution as solvent, filling the column with mother nuclides in a solution, oxidizing the solution with hydrogen peroxide and then acidifying with hydrochloric acid. The quantity of the adsorbed mother nuclides is 10% of the maximum adsorption capacity of the stationary phase. The procedure for the production of a radioactive daughter nuclide for medical applications, comprises allocating a generator with a chromatography column (3) having a stationary phase and an adsorbed mother nuclide at the stationary phase, eluting the daughter nuclides from the chromatography column with 0.9% of sodium chloride solution as solvent, filling the column with mother nuclides in a solution, oxidizing the solution with hydrogen peroxide and then acidifying with hydrochloric acid. The quantity of the adsorbed mother nuclides is 10% of the maximum adsorption capacity of the stationary phase. The chromatography column is filled with oxides of aluminum, zirconium, manganese or titanium or its mixture. The mother nuclide is tungsten-188 in an acidic solution of sodium tungstate (Na_2WO_4) that decomposes in rhenium-188. An independent claim is included for a generator for radioactive substances with a chromatography column.

IPC 8 full level

G21G 1/00 (2006.01); **G21H 5/02** (2006.01)

CPC (source: EP)

G21G 1/0005 (2013.01); **G21G 1/001** (2013.01); **G21H 5/02** (2013.01); **G21G 2001/0031** (2013.01); **G21G 2001/0042** (2013.01); **G21G 2001/0073** (2013.01)

Citation (search report)

- [X] US 2003235530 A1 20031225 - CISAR ALAN [US], et al
- [X] US 5275802 A 19940104 - KNAPP JR FURN F [US], et al
- [A] US 3833509 A 19740903 - BROWN J., et al
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- [A] US 4414145 A 19831108 - PANEK KAREL J [NL]

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

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