

## 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 ( $\text{Na}_2\text{WO}_4$ ) 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
- [A] US 2004164025 A1 20040826 - LEWIS ROBERT E [US], et al
- [A] US 4414145 A 19831108 - PANEK KAREL J [NL]

## Cited by

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## Designated contracting state (EPC)

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## Designated extension state (EPC)

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## DOCDB simple family (application)

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