

Title (en)
PROCESS FOR DETERMINING GASEOUS RADIOACTIVE COMPONENTS FROM EXHAUST GASES

Publication
EP 0139955 B1 19881228 (DE)

Application
EP 84109730 A 19840816

Priority
DE 3330460 A 19830824

Abstract (en)
[origin: EP0139955A2] 1. Process for determining gaseous radioactive components of exhaust gases which are released during the reprocessing of irradiated or burnt-out nuclear reactor fuel elements, characterised in that the gaseous components ¹⁴CO₂ and ¹⁴CH₄ are radioactive iodine isotopes or HTO vapour or mixtures of two or more of these species and are determined individually or in the form of their mixtures, in the molecule form in which they occur, with one and the same determining matrix, a zeolite selected from the group of mordenite, clinoptilolite, chabazite and Type A (with 0.4 nm or 0.5 nm pore width), in accordance with the following, successive process steps a) evacuating the zeolite at a temperature in the range of 320 K to 720 K up to a residual water content of 0.6% by wt. to 22% by wt., or drying the zeolite utilising an air stream at ambient temperature or utilising a heated air stream, the temperature of which lies in the range of > RT room temperature to 820 K up to a residual water content of 0.6% by wt. to 22% by wt. ; b) absorbing the components of the exhaust gas, which are to be determined, after cooling the pretreated zeolite in a temperature range between -30 degrees C and +25 degrees C and/or upon application of a pressure in the range between atmospheric pressure and 10 bars ; c) determining the absorbed exhaust gas components in the zeolite at a temperature in the range of 610 K to 920 K and at a pressure in the range between 5 bars and 1200 bars.

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G21F 9/02

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