

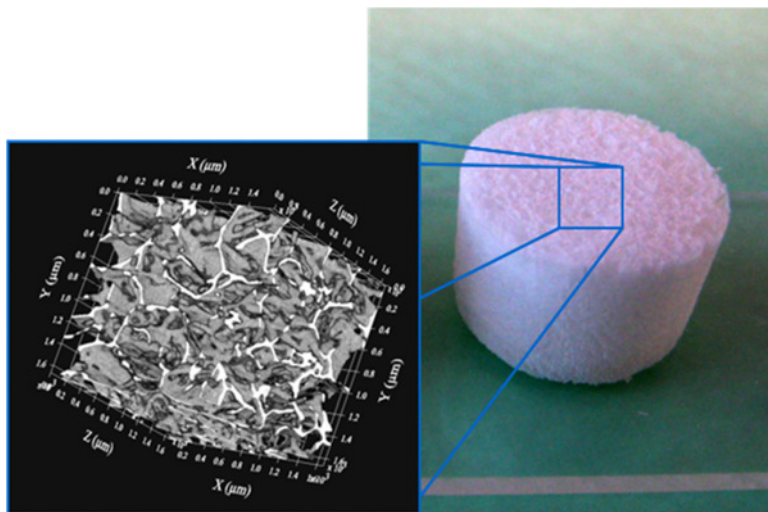


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DISPOSITIVO DOSIMETRICO 3D E METODO DOSIMETRICO PER IL SUO USO

Innovative dosimetric 3D system



Category:

Life Sciences

Patent Ownership:

UNIVERSITA' DI TRIESTE, UNIVERSITA' DELLA CALABRIA

Inventors:

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Patent Application Number

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Patent Status:

Patent Pending in Europe

Licensing Availability:

Available

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Brief description

The present invention relates to a 3D dosimeter that uses a newly developed material and to a method for using such a device for the verification of the dose delivered in radiotherapeutic medical applications and for quality controls of the radiation beams by means of the electron paramagnetic resonance (EPR) reading of the radioinduced signal.

Innovative aspects and main advantages

The dosimetric material consists of a microporous polymeric matrix of alginate that incorporates nanometric hydroxyapatite crystals. The material has been synthesized for tissue engineering applications. It is proposed for the first time for use in the physical dosimetry of radiation beams. This dosimetric device is more appropriate to the specific characteristics of lung tissue and other low-density biological tissues. The material proposed is an extended and self-supporting material allowing a 3D recording of the radiation dose.

Applications

Clinical dosimetry in modern radiation therapy

Potential market

Companies in the medical radiation detection, monitoring, and safety market

Development status

Patent pending in Europe

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