

Production and first use of (SmCl₃)-Sm-153-ion exchange resin capsule formulation for assessing gastrointestinal motility

Type: Article

Abstract:

We produced an enteric-coated gelatine capsule containing neutron-activated Sm-153-labelled resin beads for use in gastrointestinal motility studies. In vitro test in simulated gastrointestinal environment and in vivo study on volunteers were performed. Scintigraphic images were acquired from ten volunteers over 24 h while blood and urine samples were collected to monitor the presence of Sm-153. All the capsules remained intact in stomach. This proved to be a safe and practical oral capsule formulation for whole gut transit scintigraphy.

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Keyword:

Sm-153, Ion-exchange resin, Neutron activation, Scintigraphic imaging, Whole gut transit, drug-delivery-system, methacrylic-acid copolymers, neutron-activation, factors, gamma-scintigraphy, eudragit(r) l100-55, s100 combinations, colonic delivery, dosage forms, sm-153, manipulation

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