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NUMBER 1

RADIOACTIVE TRACERS

Radioactive tracer,radiotracer or radioactive label,is a chemical compound in which one or more atoms have been replaced by a radionuclide so by virtue of its radioactive decay it can be used to explore the mechanism of chemical reactions by tracing the path that the radioisotope follows from reactants to products.

Radioactive tracers are widely used to diagnose industrial reactors,for instance by measuring the flow rate of liquids,gases and solids.A radioactive tracer is a chemical compound in which one or more atoms have been replaced by a radioisotope. A radioactive tracer is used to detect an image tissues,

not affect them with radiation,so it uses only small amounts of radioactive material.

NUMBER 2

APPLICATION OF TRACER IN MEDICINE

In medicine,tracers are applied in a number of tests,such as 99mTc in autoradiography and nuclear medicine,including Single Photon Emission Computed Tomography(SPECT),Positon Emission Tomography(PET) and scintigraphy.Tracers with differentg half - lives are used fpr each stage of hydraulic fracturing.

PET

Positron emission tomography,pr PET,represents the latest technology to use radioactive tracers.It provides a more precise image and is used frequently in oncology.

Fluorine-18 as the tracer.PET is also used in cardiac and brain imaging with carbon-11 and nitrogen-13 radioactive tracers.Another innovation involves the combination of PET and CT into two images known as PETCT.