

TECHNETIUM Tc-99m MERTIATIDE

(Tc-99m MAG3, TECHESCAN MAG3™)

RADIOCHEMICAL IMPURITIES:

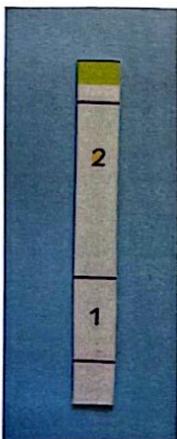
Soluble technetium-99m impurities, including Tc-99m pertechnetate and Tc-99m hydrolyzed reduced technetium.

QUALITY CONTROL METHOD:

CHROMATOGRAPHY SYSTEM:

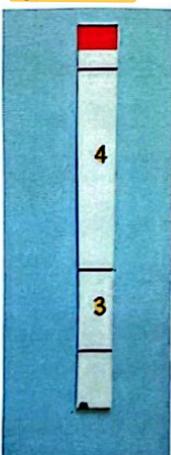
Two separate chromatography systems are utilized to assess radiochemical purity.

System 1



Gelman Solvent Saturation Pads (0.7 x 7 cm) with chloroform/acetone/tetrahydrofuran (1:1:2). Lime color-coded chromatography strip. Free Tc-99m pertechnetate and soluble Tc-99m impurities move with the solvent to the upper half of the strip ($R_f=0.5-1.0$) whereas hydrolyzed reduced Tc-99m and Tc-99m MAG3 remain at the origin ($R_f=0.0$). The cut line is located at $R_f=0.33$.

System 2



Gelman Solvent Saturation Pads (0.7 x 7 cm) with normal saline (0.9% NaCl). Peach color-coded chromatography strip. Hydrolyzed reduced Tc-99m remains at the origin ($R_f=0.0$) while other radiochemical components migrate with the solvent front ($R_f=1.0$). The cut line is located at $R_f=0.25$.