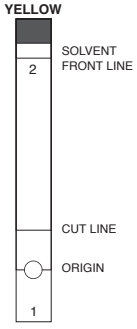
INTRODUCTION

These chromatography strips are designed to determine the radiochemical purity of Tc-99m labeled DSMA using a single strip method.



Each yellow chromatography strip has three distinct lines: an origin line, a cut line, and a solvent front line. For user convenience the back of each strip is marked with a soluble dye, located close to the solvent front line, that will migrate with the solvent front. The technologist can easily see the solvent front via the movement of the dye. Use a 10ml Wheaton Serum Vial as a developing vial.

This test requires the technologist to "spot" approximately 10 microliters of the radiopharmaceutical sample onto the chromatography strip. This is easily accomplished using a 26G needle and syringe. One drop equals a volume of 0.01 cc (10ul or ten microliters).

NOTE: *The Acetone HPLC grade solvent (Sigma-Aldrich part # 27972-5) required to complete this procedure must be purchased separately.*

Tec-Control Solvent Vendor:
Sigma-Aldrich Chemical Company
800-558-9160 / www.sigmaaldrich.com

Customers outside the USA should visit the Sigma-Aldrich web site to locate a regional office.

TEST PROCEDURE FOR DETERMINATION OF FREE PERTECHNETATE IN Tc-99m LABELED DMSA

1. Add 1cc of acetone solvent to a developing vial.
2. Using a yellow chromatography strip, spot approximately 10 microliters of the DMSA complex on the bottom pencil marked line (origin).
3. Immediately place the test strip in the developing vial containing acetone, and develop until solvent front migrates to top pencil line (solvent front).
4. Remove the strip from the vial and allow to dry.
5. Cut strip at central pencil line (cut line), producing sections 1 and 2.
6. Using a gamma counter, count background and calculate the net counts by subtracting the background counts from the number of counts registered for each strip section.

NOTE: *The strip should be placed on top or away from the well detector depending on count rate. If the strip is placed in the well, the dead time of the detector will give erroneous results.*

CALCULATION

% free pertechnetate

$$= \left[\frac{\text{(net cts sect. 2)}}{\text{(net cts sect. 1) + (net cts sect. 2)}} \right] \times 100$$

PREPARATION QUALITY

It is the decision of the nuclear medical clinician to determine the usability of the agent tested.

Authorized European Community Representative:
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EC REP

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TEC-CONTROL

CHROMATOGRAPHY STRIPS

For Tc-99m Labeled DMSA

OPERATION MANUAL
150-025

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