

INTRODUCTION

The Aluminum Breakthru Kit provides a rapid, easy and inexpensive way to test aqueous solvents, particularly pertechnetate generator eluate, for trace quantities of aluminum.

Aluminum forms an intense red precipitate with the indicator paper, and the intensity of the color is directly proportional to the amount of aluminum in the solvent. The United States Pharmacopeia allows a concentration <10 micrograms per milliliter (10 µg/ml) aluminum and the British/European Pharmacopeia allows a concentration of <5 microgram per milliliter (5 µg/ml) in technetium 99m eluate from a fission Molybdenum 99 generator.

PROCEDURE

1. Place a drop of the eluate or solvent to be tested on the indicator paper. The best procedure is to form a hanging drop using a 19-22G needle.
2. Place a drop of the standard aluminum solvent on the indicator paper. Use the same size drop. Standard solvent is 10 µg/ml (gray solvent) or 5 µg/ml (light green solvent).
3. Compare the intensity of the red spot formed. If the eluate spot is less intense than the standard solvent, the eluate contains less than 10 µg/ml aluminum (using gray solvent) or less than 5 µg/ml aluminum (using light green solvent).

REFERENCES

Miniaturized Chromatographic Quality-Control Procedures for Tc-99m Radiopharmaceuticals; A. Michael Zimmer and Dan G. Pavel, Journal of Nuclear Medicine, Vol. 18/12, Dec. 1977, pg. 1230.

Technical Parameters Associated with Miniaturized Chromatography Systems; Raimund A. Taukulis, A. Michael Zimmer, Dan G. Pavel and Bhupendra A. Patel, University of Illinois Medical Center, Chicago, Illinois, Journal of Nuclear Medicine Technology, Vol. 7/1.

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**TEC-CONTROL
CHROMATOGRAPHY
STRIPS**

For Aluminum Breakthru

OPERATION MANUAL

150-782

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