

Material and Procedure

ROTOP QC – ITLC System is specifically designed to meet the requirements for accurate thin-layer chromatographic procedures applied on ^{99m}Techneium based radiopharmaceuticals. All system components have been assembled from high-quality materials matching each other perfectly. User-friendly modular components enable reliable determination of radiochemical purity of different ^{99m}Techneium kits with little effort in terms of manpower, time and money. Base and target line are already marked on the chromatographic strips. The development of the chromatograms requires 10 minutes, the Pertechnetate Quicktest 3 minutes only.

Basis Two 10 mL vials inserted in 1 support and covered with 2 cylindrical glasses form small chromatographic chambers.

Material Four sets of material each combining 8 mL developing solvent, seven chromatographic strips and seven 10 mL vials.

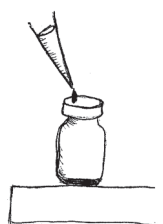
The scheme on the back page indicates which set to be used for particular kits.

Procedure

Label radiopharmaceutical kit according to manufacturer's instructions.

Choose appropriate set (back page). Follow general conditions of thin-layer chromatographic procedures.

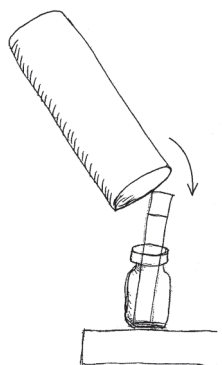
1. Label small vial with name of solvent and insert vial in support. Load with 1 mL of solvent.
2. Label strip accordingly above target line using a smooth pencil. Carefully mark appropriate cut line at the edge of strip.
3. Put a sample of radiolabeled kit centrally on base line, resulting in a spot of 5 mm maximum. An accurately calibrated syringe should be used.
4. Put strip in small vial and cover with cylindrical glass.
5. Immediately take out strip, when front line of solvent reaches the coloured target line at the top of strip, with a pair of tweezers and let the strip dry.
6. For calculation of impurities check package leaflet of set applied.



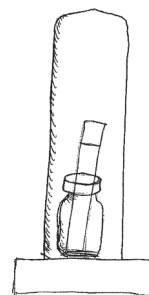
1. Load solvent.



2. Put on sample.










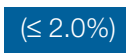



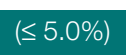














3. Put in strip and cover with glass.







4. Wait for development.

For fast and reliable quality control of radiochemical purity (RCP) of 99m-Technetium Kits

Chromatographic strips for test of				
		Pertechnetate	Colloidal Technetium	Pertechnetate Quicktest
				
Compound (RCP accept. crit.)		ROTOP QC - ITLC Sets (RCP accept. crit.)		
MIBI	(≥ 94%)			not applicable
HMPAO	(≥ 80%)			not applicable
MAG-3	(≥ 94%)			
MDP	(≥ 95%)			
DTPA	(≥ 95%)			
DMSA	(≥ 95%)		not applicable	
HSA Microspheres			not applicable	
HSA Nanocolloids			not applicable	
Tektrotyd	(≥ 90%)			
RCP acceptance criteria: Ph. Eur. or SPC		ROTOP QC – Quicktest		

ROTOP QC – ITLC Sets:
validated for use with
ROTOP QC – ITLC Basis

	QC – ITLC W	ITLC/water for injection
	QC – ITLC M	ITLC/methylethylketon (MEK)
	QC – ITLC WAE	ITLC/water/acetonitril/glacial acetic acid
	QC – Quicktest	carton/methylethylketon (MEK)