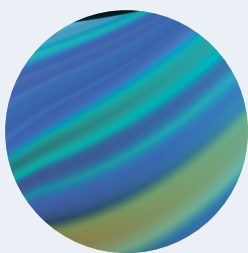


COLD KITS

for technetium-99m generator



CATALOG



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ABOUT COMPANY

CMR (Center of Molecular Research) was founded in 2001 by the group of professional scientist and specialists in nuclear medicine and international economic relations spheres firstly focusing on production and distributing of Oxygen-18 water with Isotopic Enrichment $\geq 98\%$ and other medicine isotopes. After more than 20 years of development today CMR is a vertically constructed united group of companies having its representatives and offices in many countries of the world.



Nowadays CMR is not only one of the world's largest manufacturers of Oxygen-18 water but also the qualified supplier of a wide range of products including STABLE AND RADIOACTIVE ISOTOPES, PEPTIDES AND CHEMICAL KITS, which completely satisfy the needs of medicine centers and hospitals, scientist and technologists in isotopic fields.



COLD KITS OVERVIEW

Cold kits for Tc-99m generator are reagents used for diagnostic of different parts of the body and body tissues applicable in the sphere of nuclear medicine. There are at least 30 regular used radiopharmaceuticals based on Technetium-99m used for diagnostic of brain, thyroid, liver, gall, kidney, blood and others. Also cold kits are used in medical tests as radioactive detector, which observes with the help of medical equipment. Cold kits for Tc-99m generator are one of the most demanded products in the nuclear medicine by clinics and hospitals.

Currently CMR offers 9 positions of Cold kits for Tc-99m generator including MAG3, MIBI, PYP and others.

KITS FOR TECHNETIUM-99M GENERATOR

lyophilizate for preparation of solution for intravenous introduction.

Name	In the one vial with lyophilized mixture:
Br-HIDA	Br-HIDA is suitable agent for dynamic scintigraphy of the hepatobiliary system.
DTPA	DTPA is suitable agent for dynamic scintigraphy of the kidneys, for glomerular filtration rate measurements, for radionuclide angiocardiology, for visualization of the brain tumours.
MAG3	MAG3 is suitable agent for evaluation of renal function radionuclide measurements.
DMSA	DMSA is suitable agent for scintigraphy of the kidneys, has proven valuable in the detection of the size, shape, position and presence of the damage of the kidneys and its function.
PHYTATE	PHYTATE is suitable agent for liver scintigraphy, has proven valuable in the detection of the shape, size and presence of the damage of the liver and spleen at tumours, cirrhosis, hepatitis and others diseases.
MDP	MDP is suitable agent for bone scintigraphy, has proven valuable in the detection of primary and metastatic tumours, osteomyelitics, bone-joint tuberculosis etc.
HEDP	HEDP is suitable agent for bone scintigraphy, has proven valuable in the detection of primary and metastatic tumours, osteomyelitics, bone-joint tuberculosis etc.
PYP	PYP is suitable agent for bone scintigraphy, detection of acute myocardial infarctions and malignant tumours of the ovaries, for the red blood cells (ABC) labelling in vivo.
MIBI	MIBI is suitable agent for evolution of the myocardium perfusion at its different pathological states and for the scintigraphy of the malignant tumors of the lung and breast.

PACKAGING

The kit is packaged into the carton box, 5 vials of kit in each box.

STORAGE CONDITIONS

Hermetically sealed vials in a dark place at 2-10 °C.

Br-HIDA (BROMEZIDA, ^{99m}Tc)

Indications:

Bromezida, ^{99m}Tc is suitable agent for radionuclide hepato cholecystography for liver, gallbladder, biliary tract, jaundice of various etiologies and other lesions of the pancreatic-duodenal area.



Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 1-8 ml of eluate of technetium-99m generator with volumetric activity 37-185 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 1-4 tests in adults
- if required, the eluate may be diluted previously by isotonic sodium chloride solution to the required radioactive concentration
- the radiopharmaceutical is ready for use in 30 minutes after adding the eluate
- shake the contents of the vial until complete dissolution of the reagent

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium-99m		37 – 185 MBq
Na-2,4,6-trimethyl-3-bromophenylcarbamoyl-methyliminodiacetat	41,5 mg	5,19-41,5 mg
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder

18 months after
the production date

Radiopharmaceutical

used within 6 hours
after the preparation

DTPA (PENTATECH, 99mTc)

Indications:

Pentatech, 99mTc is suitable agent for dynamic renal scintigraphy with various urinary tract diseases (glomerulonephritis, pyelonephritis, urolithiasis, etc.) with suspected brain tumor, and pathology of the heart and great arteries using the method of radionuclide angiocardiology.



Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium-99m generator with volumetric activity 75-1500 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 5 tests in adults
- if required, the eluate may be diluted previously by isotonic sodium chloride solution to the required radioactive concentration
- the radiopharmaceutical is ready for use in 30 minutes after adding the eluate
- shake the contents of the vial until complete dissolution of the reagent

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium-99m		75-1500 MBq
Stannous dichloride	41,5 mg	0,066 mg
Calcium trisodium pentetate	4,8 mg	0,96 mg
Stannous dichloride	0,16 mg	0,032 mg
Sodium chloride		9,0 mg.

Expiry:

Powder

1 year after
the production date

Radiopharmaceutical

used within 5 hours
after the preparation

PYP (PYRPHOTECH, ^{99m}Tc)



Indications:

Pyrphotech, ^{99m}Tc is suitable agent for skeletal scintigraphy to determine the pathological changes of various etiology (primary and metastatic tumors, osteomyelitis, bone and joint tuberculosis, etc.), for scintigraphic detection of acute myocardial infarction in the differential diagnosis of ovarian tumors, for labeling erythrocytes in vivo with radionuclide ventriculography to determine the volume of circulating and deposited blood (CBV and DBV) and emission computed tomography (ECT) of the liver with the labeled erythrocytes.

Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 5-10 ml of eluate of technetium-^{99m} generator with volumetric activity 37-185 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 5 tests in adults.
- If necessary, the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- the preparation is ready for use after dissolving completely of the dried reagent
- shake carefully to dissolve the dried mixture

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- ^{99m}		185 – 1480 MBq
Stannous dichloride dihydrate	2,09 mg	0,21-0,42 mg
Sodium diphosphate decahydrate	27,35 mg	2,73-5,47 mg
Sodium chloride		9,0 mg

Expiry:

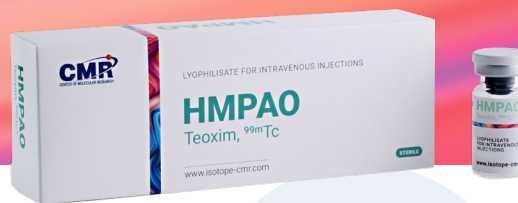
Powder

1 year after the production date

Radiopharmaceutical

used within 3 hours after the preparation

HMPAO (TEOXIM, ^{99m}Tc)



Indications:

Teoxim, ^{99m}Tc is suitable agent for regional cerebral blood flow scintigraphy and for white blood cell labelling in vitro.

NOTE:

- **do not use** a breather needle
- shake carefully to dissolve the dried mixture

Preparation of the radiopharmaceutical for regional cerebral blood flow scintigraphy:

- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium- 99m generator with volumetric activity 37-148 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- when necessary the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- it is necessary to eluate Tc- 99m pertechnetate not later than 24 hours after the last elution
- it is necessary to use the solution of Tc- 99m pertechnetate within 2 hours after the elution
- the preparation is ready for use after dissolving completely of the dried reagent
- one vial is sufficient for 1 tests in adults.

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- 99m		37 – 185 MBq
Na-2,4,6-trimethyl-3-bromophenylcarbamoyl-methyliminodiacetat	41,5 mg	5,19-41,5 mg
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder

1 year after
the production date

Radiopharmaceutical

used within 30 min
after the preparation

MAG3 (TECHNEMAG, ^{99m}Tc)



Indications:

Technemag, ^{99m}Tc is suitable agent for application of the radiopharmaceutical is indicated in adults with different pathology of urinary system in order to evaluate the total and separate renal excretory and upper urinary tract function, the study of their anatomical and topographical features.

Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 4ml of eluate of technetium- 99m generator with volumetric activity 37-185 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- the radiopharmaceutical is ready for use in 15 minutes after cooling of the vial at room temperature
- one vial is sufficient for 2-5 tests in adults
- if required, the eluate may be diluted previously by isotonic sodium chloride solution to the required radioactive concentration
- after complete dissolution, the vial in a lead shielding container (with holes) is kept in a boiling water bath during 15 minutes after the water boils. The water level in the water bath should be above the level of the radiopharmaceutical solution in the vial
- shake the contents of the vial until complete dissolution of the powder

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- 99m		37 – 185 MBq
Stannous dichloride	0,024mg	0,006 mg
S-benzoylmercap toacetyltriglycine	0,5 mg	0,125 mg
Sodium tartrate	20,0 mg	5,0 mg
Sodium chloride		9,0 mg.

Expiry:

Powder

1 year after
the production date

Radiopharmaceutical

used within 5 hours
after the preparation

DMSA (TECHNEMEK, ^{99m}Tc)



Indications:

Technemek, ^{99m}Tc is suitable agent for renal scintigraphy to determine their form, sizes, position, developmental abnormalities and the presence of organic and functional lesions.

Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium- 99m generator under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- do not use a breather needle
- one vial is sufficient for 10 tests in adults.
- if necessary, the eluate from a generator may be diluted previously by saline solution 0.9 % to the required radioactive concentration
- the preparation is ready for use in 30 min after addition of the eluate.
- shake carefully to dissolve the dried mixture

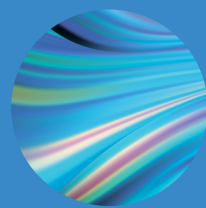
Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- 99m		37 – 185 MBq
Stannous dichloride	0,18mg	5,19-41,5 mg
Dimercaptosuccinic acid	1,05 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder	Radiopharmaceutical
1 year after the production date	used within 5 hours after the preparation

MIBI (TECHNETRIL, ^{99m}Tc)



Indications:

Technetrit, ^{99m}Tc is suitable agent for estimation the myocardial perfusion in various pathological processes that lead to the disorder of the blood supply (coronary atherosclerosis, acute myocardial infarction, post-infarction and postmyocarditis cardiosclerosis, coronary heart disease), as well as to visualize the malignant tumors of lungs and breast.

Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 3 ml of eluate of technetium-99m generator under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- do not use a breather needle
- one vial is sufficient for 5 tests in adults
- when necessary the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- the preparation is ready for use after cooling of the vial to the room temperature
- place the vial with the lead shielding upright in a boiling water bath for 15 minutes. Timing for 15 minutes is begun as soon as the water being to boil again

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium-99m		37 – 185 MBq
Stannous dichloride	0,05 mg	0,017 mg
Copper tetramibi tetrafluoroborate	0,80 mg	0,267 mg
L-cysteine hydrochloride monohydrate	1,2 mg	0,4 mg
Mannitol	10,0 mg	3,33 mg
Sodium dihydrogencitrate	11,0 mg	3,67 mg
Sodium chloride		9,0 mg

Expiry:

Powder

1 year after
the production date

Radiopharmaceutical

used within 5 hours
after the preparation

PHYTATE (TECHNEPHYTE, ^{99m}Tc)

Indications:

Technephyte, ^{99m}Tc is suitable agent for scintigraphic evaluation of anatomic and topographic features of liver and spleen (shape, size, structure) in tumors, cirrhosis, hepatitis and other diseases.



Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium- 99m generator with volumetric activity 185-1480 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 5 tests in adults
- if necessary, the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- the preparation is ready for use after dissolving completely of the dried reagent
- shake carefully to dissolve the dried mixture

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- 99m		185 – 1480 MBq
Stannous dichloride	0,275 mg	0,065-0,52 mg
Sodium chloride	0,52 mg	9,0 mg.
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder	Radiopharmaceutical
1 year after the production date	used within 5 hours after the preparation

Indications:

MDP is suitable agent for bone scintigraphy, has proven valuable in the detection of primary and metastatic tumours, osteomyelitis, bone-joint tuberculosis etc.

Preparation of the radiopharmaceutical:

- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium-99m generator with volumetric activity 185-740 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 3 tests in adults
- if necessary, the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- the preparation is ready for use after dissolving completely of the dried reagent
- shake carefully to dissolve the dried mixture

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium-99m		37 – 185 MBq
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder

18 months after
the production date

Radiopharmaceutical

used within 6 hours
after the preparation

HEDP (PHOSPHOTECH, ^{99m}Tc)



Indications:

Phosphotech, ^{99m}Tc is suitable agent for skeletal scintigraphy in order to identify foci of pathological changes of various origins and prevalence; primary and metastatic malignant tumours, osteomyelitis, osteoarticular tuberculosis, arthritis of various origins.

Preparation of the radiopharmaceutical:

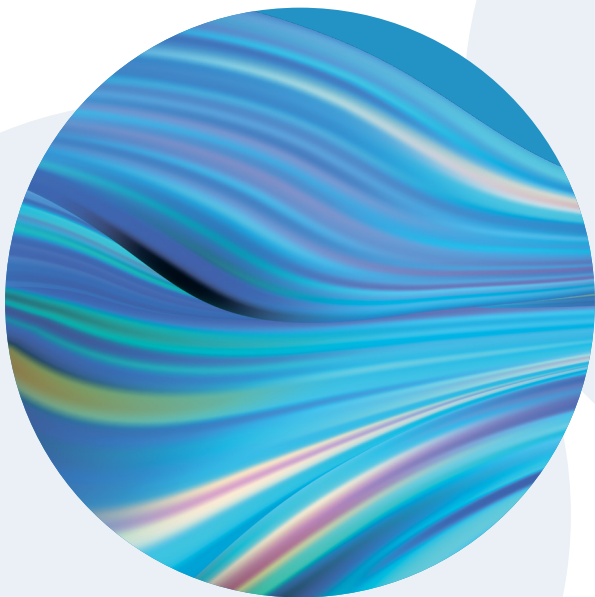
- take one vial from the kit and place it in the lead shielding
- 5 ml of eluate of technetium- 99m generator with volumetric activity 185-740 MBq/ml under aseptic conditions is injected using a syringe into the vial piercing the rubber stopper with the needle
- one vial is sufficient for 5 tests in adults.
- if necessary, the eluate from a generator may be diluted previously by saline solution to the required radioactive concentration
- the preparation is ready for use in 20 minutes
- shake carefully to dissolve the dried mixture

Composition:

Name	In the one vial with lyophilized mixture:	In 1 ml of the radiopharmaceutical:
Technetium- 99m		37 – 185 MBq
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.
Stannous dichloride	0,52 mg	0,065-0,52 mg
Sodium chloride		9,0 mg.

Expiry:

Powder	Radiopharmaceutical
1 year after the production date	used within 5 hours after the preparation



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