

# <sup>99m</sup>Tc mebrofenin

Bridatec<sup>®</sup>, <sup>99m</sup>Tc-IDA

## 1. Indications

<sup>99m</sup>Tc-mebrofenin injection kit is approved for hepatobiliary imaging and hepatobiliary function studies.

## 2. Preparation

Approved product, see summary of product characteristics (SmPC).

## 3. Quality control

Approved product, see summary of product characteristics (SmPC) and the European Pharmacopeia.

## 4. Interactions

### *Nicotinic acid*

Nicotinic acid is toxic to hepatocytes and may impair uptake and excretion of <sup>99m</sup>Tc-mebrofenin in bile.

### *Opiate analgesics (fentanyl, morphine etc)*

Opiate analgesics cause spasm in the Sphincter of Oddi and increased intrabiliary pressure. This increases biliary - bowel transit time may enhance activity in the gall bladder.

### *Atropine en somatostatin*

Atropine and somatostatin may impair gall bladder emptying.

### *Chemotherapy*

Chemotherapy via an indwelling hepatic artery catheter can adversely affect gal bladder visualization, since a chemical cholecystitis has been described.

## 5. Adverse events

There are no product specific adverse events observed or reported yet.

## 6. Biodistribution & pharmacokinetics

Following intravenous injection, <sup>99m</sup>Tc-mebrofenin is bound to plasma proteins and carried to the liver. It is cleared rapidly from the plasma, less than 1% of the administered activity remaining one hour after injection. <sup>99m</sup>Tc-mebrofenin is taken up by active transport into hepatocytes in a manner similar to bilirubin, reaching peak activity in the liver in 12 min. The liver T<sub>1/2</sub> is 25-30 min in healthy subjects but this may be influenced by plasma albumin concentration, hepatic blood flow and hepatocyte function.

The radio-isotope can be unchanged in bile or bound to be excreted to bile salts, either within the liver cell, either directly after excretion. In the urine, only small amounts being

eliminated, unless there is a significant biliary obstruction.

In healthy people, the bile ducts to be visible within 5-20 min after the injection and the gallbladder within 10-40 min.

### **7. Stability**

The product has a shelf life of 12 month, respectively 6 h after reconstitution. It has to be stored below 25°C.

### **8. Literature**

- SmPC Tc-99m-mebrofenin, BRIDATEC 40mg kit for radiopharmaceutical preparation.
- KNMP kennisbank Technetium (99mTc) mebrofenine.