1. **Indications**
Pulmonary perfusion scintigraphy.
As secondary indication 99mTc-albumin macroaggregates may be used for venoscintigraphy.

2. **Preparation**
Approved product, see summary of product characteristics (SmPC). 99mTc Technetium macrosalb is a pale-white suspension and should be carefully swirled once again prior to injection, in order to achieve a uniform distribution of the particles and in order to avoid formation of larger-sized aggregates.

3. **Quality control**
Particle sizes differ between the available drug products. The drug product complies with the European Pharmacopeia (PhEur) monograph for Technetium (99mTc) macroslab injection. Not more than 10 particles have a maximum dimension greater than 100 µm and no particle having a maximum dimension greater than 150 µm.

4. **Interactions**
Different medicinal products cause a change in the biological distribution of 99mTc Technetium macrosalb:
- Chemotherapeutic agents such as methotrexate, bleomycin and cyclophosphamide.
- Various drugs: Magnesiumsulphate, heroin, nitrofurantoin.
- Heparin and bronchodilators improve bio distribution in the lungs.

5. **Contraindications**
- Hypersensitivity to the active substance or to any of the excipients
- Severe pulmonary hypertension

6. **Adverse reactions**
- Hypersensitivity reactions were reported with a wide array of symptoms ranging from mild skin reactions to anaphylactic shock, which however was only reported in isolated cases.
- Injection site reactions (e.g. cellulitis, inflammation, pain, erythema, swelling).
- Impairment of cardiac and circulatory functions in the form of changes in respiration, pulse, blood pressure and collapse, which may be related to vascular occlusion (very rarely).

7. **Biodistribution & pharmacokinetics**
Following intravenous administration, more than 90% of 99mTc-macrosalb is retained in lung capillaries and arterioles. Organ selectivity is directly related to particle size.
The aggregates remain in the lungs for a variable period of time, depending on structure, size and number of particles. Particles between 5-90 µm are eliminated from the lungs with a biological half-life of approximately 2-8h. The decrease in pulmonary concentration is caused by a mechanical break-down of the particles occluding the capillaries. About 30-45% of the injected radioactivity is excreted through the urine within 24 h.

8. Stability
The product has a shelf-life of about 18 months. After reconstitution the product is stable for about 12 h and has to be stored below 25°C (not in freezer).

9. Literature
- SmPC’s MAASol®, LyoMAA®, Pulmocis® and Draximage®.