PROFESSIONAL INFORMATION

SCHEDULING STATUS

S4

PROPRIETARY NAME AND DOSAGE FORM

Optiray 350 - 50 ml Injection

Optiray 350 - 75 ml Injection

Optiray 350 - 100 ml Injection

Optiray 350 - 125 ml Injection

Optiray 350 Injection

Optiray 320 - 50 ml Injection

Optiray 320 - 100 ml Injection

Optiray 300 - 30 ml Injection

Optiray 300 - 50 ml Injection

Optiray 300 - 100 ml Injection

Optiray 300 - 125 ml Injection

COMPOSITION

Optiray 350: 50 ml/ 75 ml/ 100 ml/ 125 ml/ 200 ml/ 500 ml (ioversol 74 %). Each millilitre contains 741 mg of ioversol equivalent to 35 % (350 mg/ml) organically bound iodine. The osmolality of the solution is 740 mOsm/kg. The viscosity is 8,3 mPa.s (at 37 °C).

Optiray 320: 50 ml/ 100 ml (ioversol 68 %). Each millilitre contains 678 mg of ioversol equivalent to 32 % (320 mg/ml) organically bound iodine. The osmolality of the solution is 680 mOsm/kg. The viscosity is 6,1 mPa.s (at 37 °C)

Optiray 300: 30 ml/ 50 ml/ 100 ml/ 125 ml (ioversol 64 %). Each millilitre contains 636 mg of ioversol equivalent to 30 % (300 mg/ml) organically bound iodine. The osmolality of the solution

is 643 mOsm/kg. The viscosity is 5,0 mPa.s (at 37 °C)

Excipients include trometamol, trometamol hydrochloride, sodium hydroxide and/or hydrochloric acid (for pH: 6,0 to 7,4), sodium calcium edetate, water for injections.

PHARMACOLOGICAL CLASSIFICATION

A 28 Contrast media

PHARMACOLOGICAL ACTION

Pharmacodynamic properties

Ioversol is a non-ionic X-ray contrast medium.

Pharmacokinetic properties

The pharmacokinetic profile of ioversol, together with its hydrophilic properties and a very low level of binding to serum and plasma proteins, indicate that ioversol, is distributed within the extracellular fluid space and eliminated through the kidneys by glomerular filtration. The mean (± se*) half-lives after doses of 50 ml and 150 ml of ioversol, 320 were 113 ± 8,4 and 104 ± 15 minutes respectively. Elimination via the faeces is negligible. No significant metabolism, deiodination, or biotransformation of ioversol, has been observed.

More than 95 % of the administered dose is excreted within the first 24 hours, with the peak urine concentration occurring in the first 2 hours after administration.

*Standard error

INDICATIONS

Optiray 350 is indicated for angiography throughout the cardiovascular system. The uses include coronary, peripheral, visceral and renal angiography, aortography and left ventriculography. **Optiray 350** is also indicated for contrast enhanced computed tomography of the head and body, intravenous urography, intravenous digital subtraction angiography and venography.

Optiray 320 is indicated for angiography throughout the cardiovascular system. The uses include cerebral, coronary, peripheral, visceral and renal angiography, in aortography and left ventriculography. **Optiray 320** is also indicated for contrast enhanced computed tomography of the head and body and intravenous urography.

Optiray 320 is indicated in children for angiocardiography, contrast enhanced computed tomography of the head and body, and intravenous urography.

Optiray 300 is indicated for cerebral, peripheral and visceral angiography. **Optiray 300** is also indicated for contrast enhanced computed tomography of the head and body, intravenous urography, intravenous digital subtraction angiography and venography.

Optiray 300 is indicated in children for cerebral, peripheral and visceral angiography, and for intravenous urography.

CONTRAINDICATIONS

Hypersensitivity to ioversol or to any of the ingredients, including excipients.

Proven hypersensitivity to iodine-containing contrast media.

Manifest hyperthyroidism.

Pregnancy and lactation. (see **PREGNANCY AND LACTATION**)

WARNINGS AND SPECIAL PRECAUTIONS

Diagnostic procedures which involve the use of iodinated intravascular contrast agents such as **Optiray** should be carried out under the direction of personnel skilled and experienced in the particular procedure to be performed.

A fully equipped emergency cart, or equivalent supplies and equipment, and healthcare

professional competent in recognising and treating adverse reactions of all types, should always be available.

Fatal reactions have been associated with the administration of water-soluble contrast media including Optiray. It is, therefore of the utmost importance that a course of action is carefully planned, in advance, for the treatment of serious reactions, and that appropriate and adequate facilities and personnel be readily available in case of a severe reaction. Patients should be observed for a possible severe reaction, during, and for at least 30 to 60 minutes after administration of Optiray. Patients with known or suspected hypersensitivity to iodinated contrast media should be closely observed.

The presence of renal damage in diabetic patients is one of the factors predisposing to renal impairment following Optiray administration. This may precipitate lactic acidosis in patients who are taking biguanides, such as metformin. As a precaution, biguanides should be stopped prior to the time of the Optiray examination for 48 hours and reinstated only after control of renal function has been regained.

Optiray should not be used for persons who are allergic to iodine.

Optiray may cause anaphylaxis or other manifestations of allergy, including nausea, vomiting, dyspnoea, erythema, urticaria and hypotension. An increased risk of such reactions is associated with patients who have a history of increased sensitivity to iodine, or known allergies, asthma or hypersensitivity. In such patients, the benefit should clearly outweigh the risk (see **CONTRAINDICATIONS**).

Patients should be informed that allergic reactions may develop up to several days post administration; in which case a medical practitioner should be consulted immediately.

Pre-testing cannot be relied on to confidently predict severe allergic reactions. The thorough assessment of the medical history of the specific patient may be more accurate in predicting

potential adverse reactions. A positive history of allergy is not a contraindication, but does require caution (see **CONTRAINDICATIONS**). Pre-medication with antihistamines and corticosteroids to avoid or minimise allergic reactions should be considered. However, this pre-medication does not always prevent the occurrence, but may reduce both the incidence and severity of severe adverse events.

Patients with congestive heart failure should be observed for several hours following the procedure to detect delayed haemodynamic disturbances, which may be associated with a transitory increase in the circulating osmotic load.

Serious neurological events, including permanent paralysis, have been observed following direct injection into cerebral arteries or vessels supplying the spinal cord, or in angiocardiography. A cause-effect relationship to the contrast medium has not been established since the patients' pre-existing condition and procedural technique are causative factors in themselves.

Caution must be exercised in patients with severely impaired renal function, combined renal and hepatic disease, or anuria, diabetes mellitus, homozygous sickle cell disease, multiple myeloma or other paraproteinaemia, particularly when large doses are administered. Serious renal effects, including acute renal failure, may occur in these patients. Effective hydration prior to the administration of **Optiray** is essential and may decrease the risk of renal injury. Preparatory dehydration is dangerous and may contribute to acute renal failure especially in myelomatous patients, since this may predispose the patient to precipitation of the myeloma protein.

In patients with homozygous sickle cell disease, hyperosmolar agents such as X-ray contrast media, including **Opitray**, may effect sickling of the erythrocytes. Hence, there is a need for careful consideration before the intra-arterial administration of such agents to patients with

homozygous sickle cell disease.

Reports of thyroid storm following the intravascular use of iodinated radiopaque agents in patients with hyperthyroidism or with an autonomously functioning thyroid nodule, suggest that the additional risk be evaluated in such patients before use of **Optiray** (see **CONTRAINDICATIONS**).

Neonates should be carefully monitored as transient hypothyroidism was observed in neonates following the administration of iodinated radiopaque agents (see **DOSAGE AND DIRECTIONS FOR USE** sub-section "**Children** (older than four weeks)").

Administration of **Optiray** to patients known or suspected of having phaeochromocytoma should be performed with extreme caution. If, in the opinion of the, medical practitioner the possible benefits of such procedures outweigh the considered risks, the procedure may be performed; however, the amount of **Optiray** injected should be kept to an absolute minimum. The blood pressure should be assessed throughout the procedure, and measures for treatment of a hypertensive crisis should be available. Due to risk of a hypertensive crisis, a premedication with α- and ß-blockers is advisable when **Optiray** is administered intravascularly.

General anaesthesia may be indicated in selected patients. However, a slightly higher incidence of adverse reactions has been reported in these patients, probably due to the hypotensive effect of the anaesthetic.

In angiographic procedures, the possibility of dislodging plaques or damaging or perforating the vessel wall should be considered during catheter manipulations and **Optiray** injection. Test injections to ensure proper catheter placement are recommended.

Angiography should be avoided whenever possible in patients with homocystinuria because

of the risk of inducing thrombosis and embolism.

The anticoagulant effect of non-ionic X-ray contrast media, such as **Optiray** has been shown, *in vitro,* to be less than that of conventional ionic agents at comparable concentrations. Similar results were found in some *in vivo* studies. Serious, rarely fatal, thromboembolic events causing myocardial infarction and stroke have been reported during angiographic procedures with both ionic and nonionic contrast media. Therefore, meticulous intravascular administration technique is necessary, particularly during angiographic procedures, to minimise thromboembolic events. For this reason, standard angiographic catheters should be flushed frequently and prolonged contact of blood with contrast agent in syringes and catheters should be avoided.

In patients with advanced atherosclerosis, serious uncontrolled/severe hypertension, cardiac decompensation, senility, preceding cerebral thrombosis or embolism, special caution should be exercised. Cardiovascular reactions as bradycardia, rising or falling of blood pressure may occur more often.

Optiray should be injected with caution to avoid perivascular application. This is especially important in patients with severe arterial or venous disease. However, significant extravasation of **Optiray** may occur, especially during the use of power injectors. Generally, it is tolerated without substantial tissue injury applying conservative treatment. However, serious tissue damage (e.g. ulceration) has been reported in isolated cases requiring surgical treatment.

Warnings and Special Precautions applicable to specific indications:

Venography:

In patients with suspected phlebitis, serious ischaemia, local infections or complete occlusion of the venous system special caution should be exercised.

Peripheral angiography:

There should be pulsation in the artery, into which the **Optiray** will be injected. In patients with thromboangiitis obliterans or ascending infections in combination with serious ischaemia the angiography should only be performed with special caution, if at all.

Coronary arteriography and left ventriculography:

In these procedures cardiac decompensation, serious dysrhythmias, ischaemia and myocardial infarction may occur.

Paediatric angiocardiography:

Paediatric patients at higher risk of experiencing adverse events during **Optiray** administration may include those having asthma, a sensitivity to medication and/or allergies, congestive heart failure, a serum creatinine greater than 132,6 µmol/L or those less than 12 months of age.

INTERACTIONS

Renal toxicity has been reported in patients with liver dysfunction who were given oral cholecystographic medicines followed by intravascular contrast agents. Administration of **Optiray** should therefore be postponed in patients who have recently received a cholecystographic contrast agent.

Patients treated with interleukin may develop a higher rate of adverse reactions. The reason has not yet been clarified. An increased or delayed occurrence of these reactions within a period of 2 weeks was observed after administration of interleukin.

The arterial injection of **Optiray** should never be made following the administration of vasopressors, since they strongly potentiate neurological effects.

Laboratory test interactions:

Optiray may reduce the capacity of the uptake of iodine by the thyroid gland. The results of PBI (protein-bound iodine) and radioactive iodine uptake studies, which depend on iodine estimation, will not accurately reflect thyroid function for up to 16 days following administration of **Optiray**. However, thyroid function tests not dependent on iodine estimation, e.g. T3 resin uptake and total or free thyroxine (T4) assays are not affected.

PREGNANCY AND LACTATION

Not to be used during pregnancy or lactation (see **CONTRAINDICATIONS**).

Safety in pregnancy and lactation has not been established.

Pregnancy

There has been limited human use of **Optiray** in pregnancy. However, since any X-ray investigation during pregnancy may involve a potential foetal risk, the risk/benefit ratio should be carefully weighed. If a better known and safer alternative is available, an X-ray investigation involving **Optiray** should be avoided.

Lactation

It is not known whether **Optiray** is excreted in human breast milk. However, **Optiray** may be excreted unchanged in breast milk. Caution should be exercised when **Optiray** is administered to women breastfeeding their infants, because of potential adverse events, and mothers given **Optiray** should discontinue breastfeeding for one day.

DOSAGE AND DIRECTIONS FOR USE

Please refer to table.

The dosage depends on the type of investigation and the technique used. It is recommended that intravascularly administered iodinated contrast agents are warmed to body temperature prior to injection. The lowest dose necessary to obtain adequate visualisation should be used.

If, during administration, a reaction occurs, the injection should be stopped until the reaction has subsided.

Patients should be well-hydrated prior to, and following **Optiray** administration. No other medicines should be mixed with the solution due to the risk of chemical incompatibility. Sterile technique must be used in all vascular injections involving contrast media. All solutions should be inspected visually for particulate matter and discolouration prior to administration and should not be used if particles are observed or discolouration has occurred.

OPTIRAY IS SUPPLIED IN SINGLE DOSE AND MULTI-DOSE (500 ml) CONTAINERS.

DISCARD ANY UNUSED PORTIONS.

Adult dose:			
Procedure	**Product**	**Dosage and administration**	**Maximum total dose**
Cerebral angiography			
Carotid or vertebral artery	Optiray 320 or Optiray 300	2 - 12 ml	200 ml
Aortic arch	Optiray 320 or Optiray 300	20 - 50 ml	200 ml
Peripheral angiography			250 ml
Aortic-iliac runoff	Optiray 350 or Optiray 320 or Optiray 300	10 - 90 ml 60 ml (range 20 to 90 ml)	
Common iliac, femoral	Optiray 350 or Optiray 320 or Optiray 300	40 ml (range 10 to 50 ml)	

Adult dose:			
Procedure	**Product**	**Dosage and administration**	**Maximum total dose**
Subclavian, brachial	Optiray 350 or Optiray 320 or Optiray 300	20 ml (range 15 to 30 ml) These doses may be repeated as necessary.	
Venography	Optiray 350 or Optiray 300	50 – 100 ml per extremity. Following the procedure, the venous system should be flushed with Sodium Chloride Injection USP (United States Pharmacopeia) or 5 % Dextrose in water. Massage and elevation are also helpful for clearing the extremities.	250 ml
Left ventriculography	Optiray 350 or Optiray 320	30 – 50 ml Left ventricle: 40 ml. May be repeated as necessary. Several minutes should be permitted to elapse between each injection to allow for subsidence of possible haemodynamic disturbance.	250 ml

Adult dose:			
Procedure	**Product**	**Dosage and administration**	**Maximum total dose**
Coronary arteriography	Optiray 350 or Optiray 320	1 - 10 ml Left coronary artery: 8 ml (range 2 to 10 ml) Right coronary artery: 6 ml (range 1 to 10 ml) May be repeated as necessary. Several minutes should be permitted to elapse between each injection to allow for subsidence of possible haemodynamic disturbances.	250 ml
Visceral angiography	Optiray 350 or Optiray 320 or Optiray 300	12 - 60 ml Celiac: 45 ml (range 12 to 60 ml) Superior mesenteric: 45 ml (range 15 to 60 ml) These doses may be repeated as necessary.	250 ml
Aortography	Optiray 350 or Optiray 320	10 - 80 ml Aorta: 45 ml (range 10 to 80 ml) These doses may be repeated as necessary.	250 ml

Adult dose:			
Procedure	**Product**	**Dosage and administration**	**Maximum total dose**
Renal angiography	Optiray 350 or Optiray 320	6 - 15 ml Renal or inferior mesenteric: 9 ml (range 6 to 15 ml) These doses may be repeated as necessary.	250 ml
Urography	Optiray 350 or Optiray 320 or Optiray 300	50 - 75 ml 50 - 75 ml 50 - 75 ml	150 ml 150 ml 150 ml
Computed tomography			
Head imaging (Head CT)	Optiray 350 or Optiray 320 or Optiray 300	50 - 150 ml 50 - 150 ml 50 - 150 ml Scanning may be performed immediately after I.V. administration.	150 ml 150 ml 150 ml
Body imaging (Body CT)	Optiray 350 or Optiray 320 or Optiray 300	25 - 150 ml 25 - 150 ml 25 - 150 ml	150 ml 150 ml 150 ml

Adult dose:			
Procedure	**Product**	**Dosage and administration**	**Maximum total dose**
Digital subtraction angiography			
Intra-arterial (IA DSA)	Optiray 350 or Optiray 300	5 - 80 ml	250 ml
Intravenous (IV DSA)	Optiray 350 or Optiray 300	30 - 50 ml Injections may be repeated as necessary.	250 ml

Children (older than four weeks):		
Optiray 300 Recommended dosage schedule		
Procedure	**Dosage**	**Maximum total dose**
Cerebral angiography	1 – 3 ml/kg	100 ml
Peripheral angiogrpahy	1 – 3 ml/kg	100 ml
Visceral and renal angiography and aortography	1 – 3 ml/kg	100 ml
Intravenous urography	2 ml/kg (>1 year of age) 3 ml/kg (<1 year of age)	100 ml

Children (older than four weeks):		
Optiray 320 Recommended dosage schedule		
Procedure	**Dosage**	**Maximum total dose**
Computed tomography: Head imaging or Body	1 – 3 ml/kg	100 ml

Children (older than four weeks):		
Optiray 320 Recommended dosage schedule		
Procedure	**Dosage**	**Maximum total dose**
imaging		
Intravenous urography	0,5 – 3 ml/kg Paediatric: doses of 0,5 to 3 ml/kg have produced diagnostic opacification of the excretory tract. The usual dose is 1 to 1,5 ml/kg. Dosage for infants and children should be administered in proportion to age and body mass. The total administered dose should not exceed 3 ml/kg.	100 ml
Paediatric angiocardiography	1 to 1,5 ml/kg (usual single injection dose - 1,25 ml/kg body mass). When multiple injections are given, total administered dose should not exceed 5 ml/kg.	250 ml

Safety and effectiveness of **Optiray 300** and **Optiray 320** in children of four weeks or less, in any other indication than those listed above have not yet been established. Safety and effectiveness of **Optiray 350** in children have not yet been established and should therefore not be used in children until further data becomes available.

SIDE EFFECTS

Side effects associated with **Optiray** are generally independent of the dose administered. The side effects can be serious or life-threatening. Mild adverse events may be the first indications of serious, general reactions that may occur after iodinated X-ray contrast media including **Optiray**. **Optiray** related hypersensitivity reactions may occur, even after a delay of some hours up to several days.

Adverse reactions may be classified as follows:

a. Hypersensitivity reactions:

   Serious anaphylactic reactions generally affect the cardiovascular and respiratory system. These may be life-threatening and include anaphylactic shock, cardiac and respiratory arrest, or pulmonary oedema. Patients with a history of allergic reactions are at increased risk of developing hypersensitivity reactions. Other type 1 (immediate) reactions such as nausea and vomiting, skin rashes, dyspnoea, rhinitis, paraesthesia or hypotension.

b. Vasovagal reactions:

   e.g. Dizziness or syncope which may be caused either by the contrast medium, or by the procedure.

c. Cardiologic side effects:

   During cardiac catheterisation e.g. angina pectoris, ECG changes, cardiac dysrhythmias, conductivity disorders and coronary spasm, which may be caused by the contrast medium or by the procedure.

d. Nephrotoxic reactions:

   In patients with pre-existing renal damage or renal vasopathy e.g. decrease in renal function with creatinine elevation. These adverse effects may be transient in the majority of cases. In single cases, acute renal failure has been observed.

e. Neurotoxic reactions:

   After intra-arterial injection of the contrast medium e.g. visual disorders, disorientation,

paralysis, convulsions, or fits. These symptoms are generally transient and abate spontaneously within several hours or days. Patients with pre-existing damage of the blood-brain barrier are at increased risk of developing neurotoxic reactions.

f. Local reactions:

At the injection site e.g. rashes, swelling, vasospasm and inflammation.

g. Extravasation:

Can cause serious tissue reactions, the extent of which is dependent on the amount and strength of the contrast solution in the tissues.

From clinical studies, mild discomfort, including sensation of heat or cold, pain during the injection, and/or transient taste perversion, was noted in 10 % to 50 % of patients. In a large post-marketing study, other side effects occurred in a total of 1,1 % of the patients; the most frequent were nausea (0,4 %), skin reactions such as urticaria or erythema (0,3 %), and vomiting (0,1 %). All other events occurred in less than 0,1 % of the patients.

In the subsequent compilation, all symptoms are listed which have been reported in relation with the use of **Optiray**, and which are probably or possibly related to **Optiray**:

CLINICAL SIDE-EFFECTS (Pre-marketed):

Immune system disorders:

Very rare (< 0,01 %): Anaphylactoid (hypersensitivity) reaction; angioedema

Frequency unknown: Anaphylactic shock

Endocrine disorders:

Frequency unknown: Transient neonatal hypothyroidism

Psychiatric disorders:

Very rare (< 0,01 %): Confusional state; agitation; anxiety

Nervous system disorders:

Rare (0,01 % - 0,1 %): Syncope; dizziness; paraesthesia; tremor; headache; taste perversion

Very rare (< 0,01 %):	Somnolence; dysphasia; hypoesthesia; muscle cramps; paralysis; stupor
Frequency unknown:	Convulsions; dyskinesia; amnesia

Eye disorders:

Very rare (< 0,01 %):	Conjunctivitis allergic
Frequency unknown:	Transient cortical blindness

Ear and labyrinth disorders:

Very rare (< 0,01 %):	Tinnitus

Cardiac disorders:

Rare (0,01 % - 0,1 %):	Tachycardia
Very rare (< 0,01 %):	Dysrhythmia; atrial fibrillation; bradycardia; circulatory failure; ECG changes; heart block
Frequency unknown:	Cardiac arrest; ventricular fibrillation; coronary artery spasm; cyanosis; extrasystole; palpitations

Vascular disorders:

Rare (0,01 % - 0,1 %):	Hypotension
Very rare (< 0,01 %):	Cerebrovascular disorder; thrombophlebitis
Frequency unknown:	Shock; thrombosis; vasospasm

Respiratory, thoracic and mediastinal disorders:

Rare (0,01 % - 0,1 %):	Laryngeal spasm, oedema and stridor; cough; dyspnoea; rhinitis
Very rare (< 0,01 %):	Hypoxia; pulmonary oedema
Frequency unknown:	Respiratory arrest; bronchospasm; dysphonia

Gastrointestinal disorders:

Uncommon (0,1 % - 1 %):	Nausea
Rare (0,01 % - 0,1 %):	Vomiting; dry mouth
Very rare (< 0,01 %):	Abdominal pain; sialoadenitis; hypersalivation; tongue oedema; dysphagia
Frequency unknown:	Diarrhoea

Skin and subcutaneous disorders:

Uncommon (0,1 % - 1 %): Urticaria

Rare (0,01 % - 0,1 %): Erythema; pruritus; rash

Very rare (< 0,01 %): Increased sweating

Frequency unknown: Stevens-Johnson syndrome; pallor; acute generalised exanthematous pustulosis (AGEP); erythema multiforme (EM)

Renal and urinary disorders:

Very rare (< 0,01 %): Incontinence; acute renal failure; blood urea increased; abnormal renal function; decreased creatinine clearance; haematuria

Frequency unknown: Anuria; painful/difficult micturition

General disorders and administration reactions:

Very common (> 10 %): Hot flushes

Common (1 % - 10 %): Pain

Rare (0,01 % - 0,1 %): Face oedema (incl. periorbital oedema, etc); chills

Very rare (< 0,01 %): Chest pain; asthenic conditions; abnormal crying; injection site reactions

Frequency unknown: Fever

POST-MARKETING SIDE EFFECTS:

Immune system disorders:

Very rare (< 0,01 %): Anaphylactoid (hypersensitivity) reaction; angioedema

Psychiatric disorders:

Very rare (< 0,01 %): Confusional state; agitation; anxiety

Nervous system disorders:

Rare (0,01 % - 0,1 %): Syncope; vertigo; (including dizziness and lightheadedness); paraesthesia; tremor; headache; taste perversion

Very rare (< 0,01 %): Loss of consciousness; somnolence; hypoesthesia; muscle cramps; paralysis; aphasia

Eye disorders:

Rare (0,01 % - 0,1 %): Blurred vision

Very rare (< 0,01 %) Conjunctivitis allergic (including eye irritation, ocular hyperaemia, watery eyes, swelling of conjunctiva, etc.)

Ear and labyrinth disorders:

Very rare (< 0,01 %): Tinnitus

Cardiac disorders:

Rare (0,01 % - 0,1 %): Tachycardia

Very rare (< 0,01 %): Dysrhythmia; bradycardia; ECG changes; angina

Vascular disorders:

Rare (0,01 % - 0,1 %): Hypotension; flushing

Very rare (< 0,01 %): Hypertension; thrombophlebitis

Respiratory, thoracic and mediastinal disorders:

Rare (0,01 % - 0,1 %): Throat irritation; cough; dyspnoea; rhinitis (incl. sneezing, nasal congestion)

Very rare (< 0,01 %): Hypoxia; pulmonary oedema

Gastrointestinal disorders:

Uncommon (0,1 % - 1 %): Nausea

Rare (0,01 % - 0,1 %): Vomiting; dry mouth

Very rare (< 0,01 %): Abdominal pain; hypersalivation; tongue oedema; dysphagia

Skin and subcutaneous disorders:

Uncommon (0,1 % - 1 %): Urticaria

Rare (0,01 % - 0,1 %): Erythema; pruritus; rash

Very rare (< 0,01 %): Increased sweating

Renal and urinary disorders:

Rare (0,01 % - 0,1 %): Micturition urgency

Very rare (< 0,01 %): Acute renal failure

General disorders and administration reactions:

Very common (> 10 %): Feeling hot

Common (1 % - 10 %):	Pain
Rare (0,01 % - 0,1 %):	Face oedema (incl. eye swelling, periorbital oedema, etc); chills (incl. shaking, feeling cold)
Very rare (< 0,01 %):	Oedema; chest pain; asthenic conditions (incl. malaise, tiredness, sluggishness, etc.); abnormal crying; injection site reactions (incl. pain, erythema, and haemorrhage up to necrosis especially after extravasation)

KNOWN SYMPTOMS OF OVERDOSAGE AND PARTICULARS OF ITS TREATMENT

In overdose, side effects will be exacerbated and exaggerated. Overdose of **Optiray** is potentially fatal and may affect the respiratory and cardiovascular system.

Treatment should be symptomatic & supportive. Dialysis can be used to remove **Optiray** from the blood.

IDENTIFICATION

Clear, colourless to pale yellow solution containing no solids.

PRESENTATION

Optiray is packaged in type 1, colourless glass vials, fitted with 20 mm or 32 mm bromobutyl rubber closures and aluminium cap seals.

Vials: 30 ml (box of 10); 50 ml (box of 10 and 25); 100 ml (box of 10 and 12); 200 ml (box of 10 and 12); 500 ml (box of 5, 6 and 10)

Optiray is also supplied in prefilled hand-held syringes and power-injector syringes made of polypropylene. Blue syringe tip cap and piston are made of natural rubber.

Prefilled hand-held syringes: 50 ml (box of 10)

Prefilled power-injector syringes: 75, 100, 125 ml (box of 10)

Not all pack sizes and box sizes may be marketed.

Optiray formulations are sterile, non-pyrogenic, aqueous solutions intended for intravascular administration as diagnostic radio-opaque media.

STORAGE INSTRUCTIONS

Optiray solutions are sensitive to light and should therefore be protected from exposure. Keep the solution in the carton at all times. Solutions should also be protected from X-rays. Store at or below 25 °C.

Optiray may be stored for one month at 37 °C in a contrast media warmer with circulating air. Discard the solution in case of discoloration or particulate matter.

KEEP OUT OF REACH OF CHILDREN. Do not refrigerate. The solution is supplied in single dose or multi-dose containers. Any unused portion of single dose containers should be discarded. Any unused portion of multi-dose containers should be discarded within 10 hours after first opening.

REGISTRATION NUMBERS

Optiray 350 – 50 ml: Z/28/420

Optiray 350 – 75 ml: A40/28/0246

Optiray 350 – 100 ml: Z/28/422

Optiray 350 – 125 ml: 30/28/0282

Optiray 350: 34/28/0101

Optiray 320 – 50 ml: Z/28/412

Optiray 320 – 100 ml: Z/28/421

Optiray 300 – 30 ml: Z/28/414

Optiray 300 – 50 ml: Z/28/418

Optiray 300 - 100 ml: Z/28/417

Optiray 300 – 125 ml: 30/28/0281

NAME AND BUSINESS ADDRESS OF THE HOLDER OF THE CERTIFICATE OF

REGISTRATION

Guerbet South Africa (Pty) Ltd

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Botswana: Schedule 2

Optiray 300: BOT 0700947; Optiray 350: BOT 0700948

Namibia: Schedule 2

Optiray 300-30 ml 19/28/0001; Optiray 300-50 ml 19/28/0002; Optiray 300-100 ml 19/28/0004; Optiray 300-125 ml 19/28/0005; Optiray 350-50 ml 19/25/0007; Optiray 350-75 ml 19/28/0008; Optiray 350-100 ml 19/28/0009; Optiray 350-125 ml 19/28/0010; Optiray 350 19/28/0011