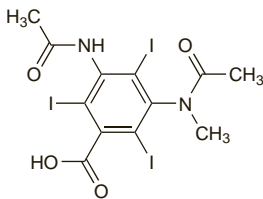


**Metrizoic Acid** (BANM, rINNM)

Acide Métrizoïque; Ácido metrizoico; Acidum Metrizoicum; Metritsoinihapo; Metrizoisyra. 3-Acetamido-2,4,6-tri-iodo-5-(N-methylacetamido)benzoic acid.

Метризовая Кислота  
 $C_{12}H_{11}I_3N_2O_4 = 627.9$ .  
 CAS — 1949-45-7.  
 ATC — V08AA02.  
 ATC Vet — QV08AA02.



**Description.** Metrizoic acid contains about 60.6% of I.

**Meglumine Metrizoate** (BANM, rINNM)

Meglumini Metrizoas; Métrizoate de Méglumine; Metrizoate Meglumine; Metrizoato de meglumina. The N-methylglucamine salt of metrizoic acid.

Меглумина Метризоат  
 $C_{12}H_{11}I_3N_2O_4 \cdot C_7H_{17}NO_5 = 823.2$ .  
 CAS — 7241-11-4.  
 ATC — V08AA02.  
 ATC Vet — QV08AA02.

**Description.** Meglumine metrizoate contains about 46.3% of I.

**Sodium Metrizoate** (BAN, rINN)

Métrizoate de Sodium; Metrizoate Sodium (USAN); Metrizoato de sodio; Natrii Metrizoas; NSC-107431.

Натрия Метризоат  
 $C_{12}H_{10}I_3N_2NaO_4 = 649.9$ .  
 CAS — 7225-61-8.  
 ATC — V08AA02.  
 ATC Vet — QV08AA02.

**Description.** Sodium metrizoate contains about 58.6% of I.

**Profile**

Metrizic acid is an ionic monomeric iodinated radiographic contrast medium (p.1474) with actions similar to those of the amidotrizoates (p.1475). It has been used as the meglumine and sodium salts, often with calcium metrizoate and magnesium metrizoate, for a variety of diagnostic procedures including angiography, cholangiography, and hysterosalpingography.

**Breast feeding.** No adverse effects have been seen in breast-feeding infants whose mothers were receiving metrizoate and the American Academy of Pediatrics considers<sup>1</sup> that it is therefore usually compatible with breast feeding.

1. American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108**: 776–89. Correction. *ibid.*; 1029. Also available at: <http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776> (accessed 27/03/06)

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**UK:** Isopaque Cysto†.

**Perflinapent** (USAN, rINN)

Dodecafluoropentanam; Dodekafluoropentaani; Dodekafluoropentan; Perflénapent; Perflinapentum. Dodecafluoropentane.

Перфленапент  
 $C_5F_{12} = 288.0$ .  
 CAS — 678-26-2.  
 ATC — V08DA03.  
 ATC Vet — QV08DA03.

**Profile**

Perflinapent is a liquid perfluorocarbon that has been used as an ultrasound contrast medium (p.1474) for echocardiography. It has been given intravenously as an emulsion containing droplets of perflinapent; on warming to body temperature the droplets

form microbubbles of perflinapent gas that provide echo-enhancement. A small amount of perflisopent (below) was also included in the formulation.

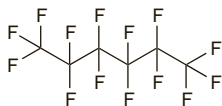
**References.**

1. Robbin ML, Eisenfeld AJ. Perflinapent emulsion: a US contrast agent for diagnostic radiology—multicenter, double-blind comparison with a placebo. *Radiology* 1998; **207**: 717–22.
2. Kitman DW, Wesley DJ. Safety assessment of perflinapent emulsion for echocardiographic contrast enhancement in patients with congestive heart failure or chronic obstructive pulmonary disease. *Am Heart J* 2000; **139**: 1077–80.

**Perflexane** (USAN, rINN)

Perflexano; Perflexanum. Tetradecafluorohexane.

Перфлексан  
 $C_6F_{14} = 338.0$ .  
 CAS — 355-42-0.

**Profile**

Perflexane is a perfluorocarbon gas that has been used as an ultrasound contrast medium (p.1474) for echocardiography. Dry microspheres containing the gas are reconstituted immediately before use, leading to the formation of microbubbles of perflexane that provide echo-enhancement; lipids are included in the microspheres to stabilise the bubbles when they form.

**Preparations**

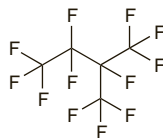
**Proprietary Preparations** (details are given in Part 3)

**USA:** Imagent.

**Perflisopent** (USAN, rINN)

Perflisopentum. Nonafluoro-2-(trifluoromethyl)butane.

Перфлизопент  
 $C_5F_{12} = 288.0$ .  
 CAS — 594-91-2.

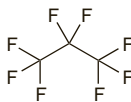
**Profile**

Perflisopent is a perfluorocarbon that has been used as an ultrasound contrast medium (p.1474) with perflinapent (above) for echocardiography.

**Perflutren** (USAN, rINN)

DMP-115; FS-069; MRX-115; Octafluoropropanum; Oktafluoropropaani; Oktafluoropropan; Perfluoropropane; Perflutrène; Perflutreno; Perflutrenum. Octafluoropropane.

Перфлутрен  
 $C_3F_8 = 188.0$ .  
 CAS — 76-19-7.

**Profile**

Perflutren is a perfluorocarbon gas used as either albumin- or lipid-coated microspheres as an ultrasound contrast medium (p.1474) for echocardiography.

The albumin-coated microspheres are suspended in 1% albumin solution immediately before use and are given in a dose of 0.5 to 3 mL by intravenous injection, repeated if necessary up to a total dose of 8.7 mL.

The lipid-coated microsphere suspension is formed by agitating the gas with a lipid solution immediately before use and is given in a dose of 10 microlitre/kg by intravenous injection, repeated once after 30 minutes if required, or as intravenous injections of 100 to 400 microlitres repeated as required up to a maximum total dose of 1.6 mL. Alternatively, 1.3 mL of the suspension may

be diluted in 50 mL of sodium chloride 0.9% and given by intravenous infusion at an initial rate of 4 mL/minute, adjusted as required, to a maximum rate of 10 mL/minute.

Serious cardiopulmonary reactions, including fatalities, have been reported with perflutren and it should be used with extreme caution in patients with pulmonary hypertension or unstable cardiopulmonary conditions. The safety of perflutren has not been established in patients with right-to-left cardiac shunts; it should also be used with extreme caution or avoided in such patients.

Perflutren has also been given by intra-ocular injection to provide tamponade in the management of retinal detachment.

**Adverse effects.** References.

1. Herzog CA. Incidence of adverse events associated with use of perflutren contrast agents for echocardiography. *JAMA* 2008; **299**: 2023–5.

**Preparations**

**USP 31:** Perflutren Protein-Type A Microspheres Injectable Suspension.

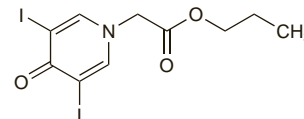
**Proprietary Preparations** (details are given in Part 3)

**Arg.:** Optison†; **Austria:** Optison; **Canad.:** Definity; **Chile:** Definity; **Cz.:** Luminty; Optison; **Denm.:** Optison; **Fr.:** Luminty; **Ger.:** Optison; **Gr.:** Optison; **Hung.:** Optison; **Israel:** Definity; **Ital.:** Optison; **Neth.:** Optison; **Port.:** Luminty; Optison; **Spain:** Optison; **Swed.:** Optison; **Switz.:** Optison; **UK:** Luminty; Optison; **USA:** Definity; Luminty; Optison.

**Propylidone** (rINN)

Propilidona; Propylidonomum; Propyljodon; Propyljiodoni. Propyl 1,4-dihydro-3,5-di-iodo-4-oxo-1-pyridylacetate.

Пропилидодон  
 $C_{10}H_{11}I_2NO_3 = 447.0$ .  
 CAS — 587-61-1.  
 ATC — V08AD03.  
 ATC Vet — QV08AD03.



**Description.** Propylidone contains about 56.8% of I.

**Pharmacopoeias.** In *Int.* and *US*.

**USP 31** (Propylidone). A white or almost white, crystalline powder. Is odourless or has a faint odour. Practically insoluble in water; soluble in alcohol, in acetone, and in ether. Store in airtight containers at a temperature of 25°, excursions permitted between 15° and 30°. Protect from light.

**Profile**

Propylidone is an iodinated radiographic contrast medium (p.1474) that has been used for bronchography as either an aqueous or oily suspension.

**Preparations**

**USP 31:** Propylidone Injectable Oil Suspension.

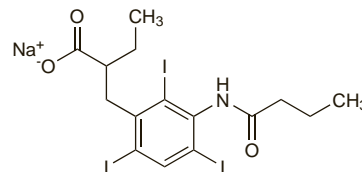
**Proprietary Preparations** (details are given in Part 3)

**Israel:** Dionasil†.

**Sodium Tyropanoate** (BAN, rINN)

Natrii Tyropanoas; NSC-107434; Tyropanoate de sodio; Tyropanoate de Sodium; Tyropanoate Sodium (USAN); Win-8851-2. Sodium 2-(3-butyramido-2,4,6-tri-iodobenzyl)butyrate.

Натрия Тиропаоат  
 $C_{15}H_{17}I_3NNaO_3 = 663.0$ .  
 CAS — 27293-82-9 (tyropanoic acid); 7246-21-1 (sodium tyropanoate).  
 ATC — V08AC09.  
 ATC Vet — QV08AC09.



**Description.** Sodium tyropanoate contains about 57.4% of I.

**Profile**

Sodium tyropanoate is an ionic monomeric iodinated radiographic contrast medium (p.1474) with actions similar to those of iopanoic acid (p.1484) and has been used for cholecystography and cholangiography.

**Sulfur Hexafluoride** (USAN)

BRI; Hexafluouro de azufre; Sulphur Fluoride; Sulphur Hexafluoride.

$F_6S$  = 146.1.

CAS — 2551-62-4.

ATC — V08DA05.

ATC Vet — QV08DA05.

**Profile**

Sulfur hexafluoride is a gas with little biological activity that is used as an ultrasound contrast medium (p.1474) for imaging of the blood vessels and for echocardiography. Microbubbles of sulfur hexafluoride are formed on reconstitution of the preparation and provide echo-enhancement; phospholipids and surfactants are included to stabilise the microbubbles. It is given intravenously as a suspension containing 45 micrograms/mL, in a usual dose of 2 mL for echocardiography, or 2.4 mL for imaging blood vessels; the dose may be repeated once if necessary.

Sulfur hexafluoride has been associated with hypersensitivity reactions; patients should be monitored for at least 30 minutes after use, and resuscitation equipment should be available. Particular care is advised in patients with ischaemic heart disease, in whom serious and occasionally fatal cardiac events have occurred:

sulfur hexafluoride is contra-indicated in patients with recent acute coronary syndrome or clinically unstable ischaemic heart disease. It should also not be given to patients with severe pulmonary hypertension, uncontrolled hypertension, acute respiratory distress syndrome, or right-to-left shunts. Care is advised in patients with lung disorders.

Sulfur hexafluoride has also been used as an adjunct in eye surgery for retinal detachment.

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**Austria:** SonoVue; **Belg.:** SonoVue; **Cz.:** SonoVue; **Denm.:** SonoVue; **Fin.:** SonoVue; **Fr.:** SonoVue; **Gr.:** SonoVue; **Ital.:** SonoVue; **Neth.:** SonoVue; **Norw.:** SonoVue; **Port.:** SonoVue; **Swed.:** SonoVue; **Switz.:** SonoVue; **UK:** SonoVue.