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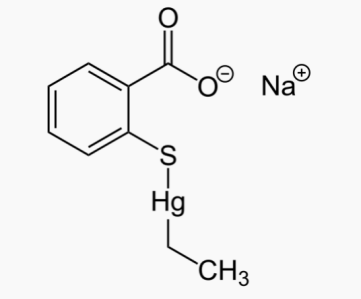
The presence of Thimerosal in vaccines was strictly prohibited by the results of its acute toxicity in mice (Lethal Doses LD50)

1- Reminder on Thimerosal

Figure 1: **Thimerosal**

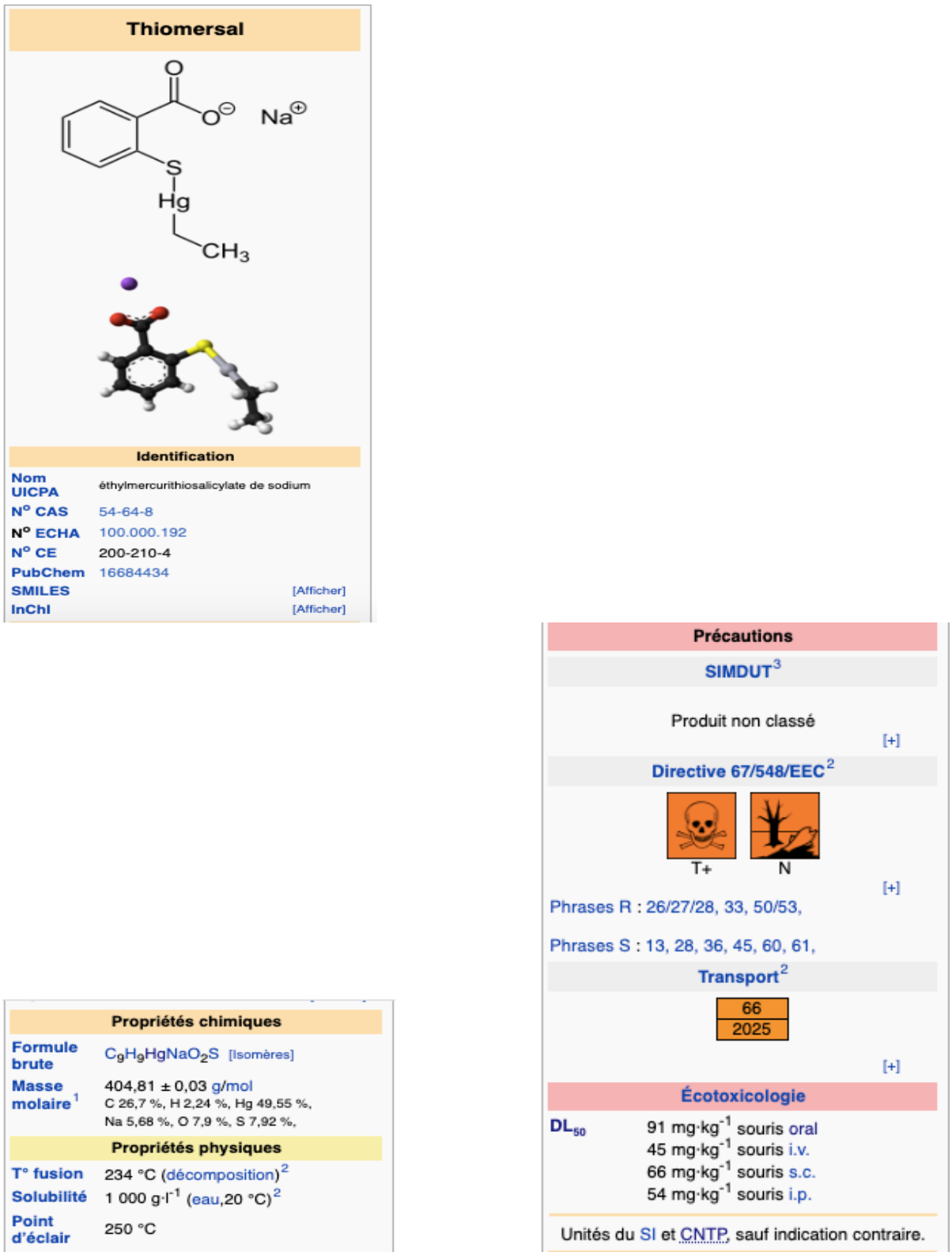


Thimerosal is also known as ***Thiomersal***, and ***Merthiolate***. Chemically it is a sodium mercurothiolate, or a sodium ethylmercuro-thiosalicylate (sodium ethylmercuri-thiosalicylate) or a sodium ethylmercuri-thio-2-benzoate. It is an organomercury chemical compound of formula $C_9H_9HgNaO_2S$, with a molar mass equal to 404.6 g, composed of 49.6% mercury (the atomic mass of mercury is equal to 200.59 g). Thimerosal was synthesized in 1926 by Morris Selig Kharasch (who obtained the patent in 1928). It has been used as an antiseptic, for disinfecting living tissue and the skin, as well as a preservative, due to its antimicrobial properties (antibacterial and fungicides). Vaccine producers used it as a preservative in vaccines from the 1930s). In the late 1990s, due to concerns about the occurrence of serious side effects, **US and European health authorities have committed to avoid the use of Thimerosal in vaccines**. Analyses of epidemiological studies carried out by the World Health Organization (WHO) in 2006 and 2008, the Food and Drug Administration (FDA), the European Medicines Agency (EMEA) in 2007, and the French Medicines Agency (Afssaps) in 2009, converge to consider that the existence of neurological risk is not established. However, clarifying that these same epidemiological studies do not rule out such a risk, the Afssaps concludes that the benefit of using vaccines containing Thimerosal remains very much greater than the risk they could represent.

2- Acute toxicity study of Thimerosal in mice

However, when one reads the technical sheet of **Thimerosal**, which appears in Wikipedia, we are surprised to discover, with astonishment, that **toxicological studies have been made** and that **the values of acute toxicity, such as Lethal Doses which kill 50% of animals, LD50, Oral, Intravenous, Subcutaneous, and Intraperitoneal**, have the product classified in the **category with the logo corresponding to a skull** (see Figure 2, next page) which means, according to **Directive 67/548 / EEC** , **that Thimerosal is classified in products which, by inhalation, ingestion, cutaneous or systemic penetration in small quantities, cause death or acute or chronic effects (by single, repeated or prolonged exposure).**

Figure 2 **Technical sheet of Thiomersal** (Thimerosal) in Wikipédia



Thiomersal

Identification

Nom UICPA	éthylmercurithiosalicylate de sodium
N° CAS	54-64-8
N° ECHA	100.000.192
N° CE	200-210-4
PubChem	16684434
SMILES	[Afficher]
InChI	[Afficher]

Propriétés chimiques

Formule brute	$C_9H_9HgNaO_2S$ [Isomères]
Masse molaire[1]	404,81 ± 0,03 g/mol C 26,7 %, H 2,24 %, Hg 49,55 %, Na 5,68 %, O 7,9 %, S 7,92 %,

Propriétés physiques

T° fusion	234 °C (décomposition)[2]
Solubilité	1 000 $g \cdot l^{-1}$ (eau,20 °C)[2]
Point d'éclair	250 °C

Précautions

SIMDUT[3]

Produit non classé [+]

Directive 67/548/EEC[2]

T+ N [+]

Phrases R : 26/27/28, 33, 50/53,

Phrases S : 13, 28, 36, 45, 60, 61,

Transport[2]

66
2025 [+]

Écotoxicologie

DL_{50}	91 $mg \cdot kg^{-1}$ souris oral 45 $mg \cdot kg^{-1}$ souris i.v. 66 $mg \cdot kg^{-1}$ souris s.c. 54 $mg \cdot kg^{-1}$ souris i.p.

Unités du SI et CNTP, sauf indication contraire.

Directive 67/548/EEC

T+

According to Directive 67/548 / EEC:

The Logo with the skull, accompanied by **T+,** which means very toxic, indicates **products which, by inhalation, ingestion, cutaneous or systemic penetration in small quantities, cause death or acute or chronic effects (by single exposure, repeated or prolonged).**

These acute toxicity LD50 data for Thimerosal were published in April 2018

Souris	LD50	intrapéritonéale	54 mg / kg (54 mg / kg)		Nippon Yakurigaku Zasshi. Journal japonais de pharmacologie. Vol. 58, p. 235, 1962.
Souris	LD50	intraveineux	45 mg / kg (45 mg / kg)	REIN, URETER ET VESSIE: "CHANGEMENTS DANS LES TUBULES (Y COMPRIS INSUFFISANCE RÉNALE AIGUË, NÉCROSE TUBULAIRE AIGUË)"	Journal trimestriel de pharmacie et de pharmacologie. Vol. 12, p. 212, 1939.
Souris	LD50	oral	91 mg / kg (91 mg / kg)		Nippon Yakurigaku Zasshi. Journal japonais de pharmacologie. Vol. 58, p. 235, 1962.
Souris	LD50	sous-cutanée	66 mg / kg (66 mg / kg)		Journal trimestriel de pharmacie et de pharmacologie. Vol. 12, p. 212, 1939.
rat	LD50	oral	75 mg / kg (75 mg / kg)		Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. Vol. -, Pg. 1130, 1966.
rat	LD50	sous-cutanée	98 mg / kg (98 mg / kg)		Toxicologie clinique. Vol. 4, p. 185, 1971.
rat	LD50	non déclaré	40 mg / kg (40 mg / kg)		"Chemistry of Pesticides", Melnikov, NN, New York, Springer-Verlag New York, Inc., 1971 Vol. -, Pg. 290, 1971.

2- Publication in 2012, in the Journal of Toxicology

Reference : [1]Martyn A. Sharpe, [1]Andrew D. Livingston, et 1David S. Baskin, 28 juin 2012. Département de neurochirurgie, The Methodist Hospital, 6565 Fannin Street, Houston, TX 77030, États-Unis.

Title of the article : *Thimerosal-Derived Ethylmercury Is a Mitochondrial Toxin in Human Astrocytes: Possible Role of Fenton Chemistry in the Oxidation and Breakage of mtDNA.*

Mechanism of Thimerosal Toxicity

The origin of the toxicity of Thimerosal lies at 2 levels:

1- The mechanism of its antimicrobial activity (references **1** and **2**)**, immediate**, bactericidal and fungicidal, which made it use as an **antiseptic** (disinfection of skin

coverings), and as a **preservative** (for vaccines). This antimicrobial activity, is attributed to the binding of mercury with the thiol groups (-SH) present, at all cellular levels, in enzymatic and structural proteins, such as at the level of ribosomes. They are "thioloprive" agents. The ethylmercury $^{+}Hg\text{-}C_2H5$ ion, released by Thimerosal, will combine with the thiol groups of certain cellular enzymes to form mercaptide-linked derivatives, as follows:

Enzyme-SH + $^{+}Hg\text{-}C_2H_5 \rightarrow$ Enzyme-S-Hg-S-C_2H_5

The thioloprive activity of Thimerosal is at the origin of its antimicrobial activity, for bacteria or fungi, but also of its high toxicity for all cells of the human organism, as indicated by the results of acute toxicity (class T+).

The sodium salt of Thimerosal (sodium mercurothiolate) was marketed under the name **Merseptyl®**, as an antiseptic solution for local application, by the GSK laboratory**. The marketing authorization (AMM) was repealed in 1996**, and the **marketing cessation declaration was published on 03/19/1997.**

References:

1- Antiseptics § antisepsis, by Ch. Dulong de Rosnay and J-B. Fourtillan, Mérignac, Laboratoires Sarget editions, Paris, 1974.

2- Antiseptics, microbiological bases of their use, by A. Crémieux, J. Fleurette, J-B. Fourtillan (et al.), Laboratoires Sarget editions, Mérignac, 1982.

2- The mechanism of its neurotoxicity, in the short and medium term, due to the formation of superoxides, by potentiating and accentuating the Fenton / Haber-Weiss chemistry

It is unanimously accepted that the “oxidative stress”, consecutive to the production of oxygenated free radicals, formed during aerobic respiration of the cells of our organism, constitutes the process of cellular aging, on which our life expectancy depends. These oxygenated free radicals, such as: $OH^{\bullet}$, $O_2^{\bullet -}$, $HO_2^{\bullet}$, $NO^{\bullet}$, $ONOO^{\bullet}$, $ROO^{\bullet}$, $RO^{\bullet}$, etc, have single electrons ($^{\bullet}$). These oxygenated free radicals are extremely reactive because, by seeking to pair, their single electrons cause a progressive destruction of the cells of the organism, in particular of the nerve cells (neurons, astrocytes). The production of these superoxides in the mitochondria of cells in the body causes damage to cellular mititochondrial DNA, particularly in normal human neurons and astrocytes.

Thimerosal accelerates the formation of superoxides and oxygenated free radicals. The mechanism is as follows:

Thimerosal will release ethylmercury, $CH_3\text{-}CH_2\text{-}Hg^{+}$, into the body, which potentiates the **chemistry of Fenton / Haber-Weiss** in the mitochondrial matrix; **which leads to the production of super-oxides and extremely neurotoxic oxygen free radicals**.

This is how **ethylmercury is a mitochondrial toxin in human neurons and astrocytes**. This finding is all the more important since the number of diseases in which mitochondrial dysfunction is involved is increasing rapidly (correlations with the increase in autism cases).

All this is corroborated by the video of **Pr F.L. Lorscheider** et al. (University of Calgary Faculty of Medicine), which clearly highlights **the role of mercury in the development of neurodegenerative diseases.**

Video: « **How Mercury Causes Brain Neuron Degeneration** »

Note: we can make the connection with the neurotoxicity mechanism for aluminum, which will potentiate the formation of superoxides by **Fenton / Haber-Weiss** chemistry. Thus, the previous video is to be compared to the video of **Pr Christopher Shaw** (Professor of Neurosciences at the University of British Columbia), which clearly highlights **the implication of aluminum in the destruction of motor neurons (dopaminergic neurons)**, and the onset of Parkinson's disease, Multiple Sclerosis (MS), Amyotrophic Lateral Sclerosis (Charcot disease), dementia with Lewy bodies, etc… See publication by the same author: "**Aluminum Adjuvant Linked to Gulf War Illness Induces Motor Neuron Death in Mice** »

Video: "**The effect of aluminum vaccines**"

After having taken note of these toxicological data which have been passed over in silence, we are struck by the dishonesty of health agencies and their experts, in all the areas covered by their expertise, whether it is pharmacology, toxicology, or chemistry. **Especially since the results of toxicological studies formally prohibit the use of Thimerosal not only as antiseptics, but also, a fortiori, in vaccines.**

Refer to the **historic vaccine trial that Robert F. Kennedy Jr has just won against the United States Government**

The American government, all the health authorities, as well as the pharmaceutical manufacturers of vaccines, lied, saying to the American justice, that they had never carried out a study to verify the safety, i.e. the toxicity to humans of Thimerosal and aluminum (aluminum adjuvant) in vaccines.

Two reports from **WHO in 2011** and **WHO in 2012** stated that the presence of Thimerosal in vaccines posed no danger to human health.

In October 2011**, WHO published the list of vaccines containing Thimerosal:** Among the vaccines containing Thimerosal are the diphtheria-tetanus-pertussis (DTP), anti-hepatitis B, anti-Haemophilus influenzae type b (Hib), rabies, influenza and meningococcal vaccines. These vaccines contained Thimerosal added as a preservative at various concentrations (8 to 50 μg per dose).