Vaccine Ingredients References

1. Drug and vaccine authorizations for COVID-19: List of authorized drugs, vaccines and expanded indications | Health Canada | Updated April 14, 2022
   > “Drugs and vaccines that have been authorized by Health Canada for use in relation to the COVID-19 pandemic are listed here.”

2. Drug Product Database: Access the database - Canada.ca | Health Canada | Updated June 18, 2015
   > “Search the Drug Product Database (DPD) to find drugs authorized for sale by Health Canada. The DPD is updated nightly and includes: availability of the drug in Canada; product monograph (PM) for human drugs…”

3. Vaccine Ingredients – Thimerosal | Children's Hospital of Philadelphia | Reviewed June 1, 2020
   > “Thimerosal contains a different form of mercury called ethylmercury. Studies comparing ethylmercury and methylmercury suggest that they are processed differently in the human body. Ethylmercury is broken down and excreted much more rapidly than methylmercury.”

4. Vaccine ingredients | Immunize BC | Reviewed July 15, 2021
   > “The amount of mercury in a thimerosal-containing influenza vaccine does not exceed 25 µg/dose. This is about the same amount as is found in a six-ounce can of Canadian albacore tuna, which has no serving limits and is considered safe to eat.”
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   > “Infants receive more aluminum from their diet in the first six months of life than from vaccines.”

5. Adjuvants - Vaccine Safety | CDC | Reviewed August 14, 2020
   > “Aluminum salts, such as aluminum hydroxide, aluminum phosphate, and aluminum potassium sulfate have been used safely in vaccines for more than 70 years. Aluminum salts were initially used in the 1930s, 1940s, and 1950s with diphtheria and tetanus vaccines after it was found they strengthened the body’s immune response to these vaccines.”

6. Evidence that endogenous formaldehyde produces immunogenic and atherogenic adduct epitopes | Scientific Reports | September 7, 2017
   > “Endogenous formaldehyde is abundantly present in our bodies, at around 100 µM under normal conditions”

7. Mammals divert endogenous genotoxic formaldehyde into one-carbon metabolism | Nature | August 16, 2017

"These findings identify an unexpected source of formaldehyde and, more generally, indicate that the detoxification of this ubiquitous endogenous genotoxin creates a benign 1C unit that can sustain essential metabolism."

8. Vaccine Ingredients – Formaldehyde | Children's Hospital of Philadelphia | Reviewed May 14, 2018
   "Formaldehyde is essential in human metabolism and is required for the synthesis of DNA and amino acids (the building blocks of protein)... Assuming an average weight of a 2-month-old of 5 kg and an average blood volume of 85 ml per kg, the total quantity of formaldehyde found in an infant's circulation would be about 1.1 mg, a value about 1,500 times more than the amount an infant would be exposed to in any individual vaccine."

9. Vaccine Ingredients: Frequently Asked Questions - HealthyChildren.org | Last Updated February 28, 2013
   "Antifreeze is typically made of ethylene glycol, which is unsafe. Confusion has arisen, because polyethylene glycol (a chemical used in antifreeze and personal care products like skin creams and toothpaste) is used in vaccines and is safe"

10. Fact check: The flu vaccine does not include many of these supposed ingredients | Reuters | October 30, 2020
    "Anti-freeze is not used in flu vaccines, but a chemical called polyethylene glycol, which may be found in anti-freeze, is used in some vaccines to inactivate the flu virus. This chemical is safe and is also used in skin creams and some medication."

11. COVID-19 vaccine guide for youth and adults: Contraindications, precautions and allergic reactions - Canada.ca | Health Canada | Updated February 3, 2022
    "Severe allergic reaction (for example, anaphylaxis) after previous administration of a COVID-19 vaccine → Consultation with an allergist or other appropriate physician should be sought."