Absence of Safety Studies of the Fluoride Products used in Artificial Water Fluoridation

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The scientific/legal determination of safety is based on 2 types of research:

1. Animal studies (toxicology studies)
2. Human studies (clinical trials, epidemiology studies)

The actual fluoride products used in artificial water fluoridation (silicofluorides Na_2SiF_6, H_2SiF_6) have neither the required animal studies (toxicology studies) nor the required human studies (randomized controlled clinical trials) to determine safety.

The actual fluoride products used in artificial water fluoridation (silicofluorides Na_2SiF_6, H_2SiF_6) have never been regulated or approved by Health Canada. Please see: http://www.newmediaexplorer.org/chris/Clinch_2011_Health_Canada_Downloads_Responsibility_Safety.pdf

- "Health Canada does not regulate hexafluorosilic acid or sodium silicofluoride products, the actual products used in water fluoridation, which are allegedly used as a medical treatment to prevent dental disease." Petition #299, Answer #3, to Auditor General of Canada

Therefore

In the absence of these safety studies, any claims that these products are "safe" are not based on well-established scientific protocols.

In the absence of these safety studies, any claims that these products are "safe" are not based on legal definitions and requirements as defined in various laws and regulations.

In the absence of any government regulation or approval of these products, any claims that these products are "safe" are not based on fundamental regulatory requirements used to protect public safety.

A. NSF Standard 60 requires animal studies (toxicology studies)

National Sanitation Foundation

"The NSF standard requires that the chemicals added to drinking water, as well as any impurities in the chemicals, be supported by toxicological evaluation."
Source: Hazan S. 2000. Letter from Stan Hazan, General Manager, Drinking Water Additives Certification Program, NSF International; to Mr. Juan (Pepe) Menedez, State of Florida, Department of Public Health, Tallahassee FL. April 24. Available from: http://www.fluoridealert.org/NSF-Letter.pdf

"Standard 60 … requires a toxicology review to determine that the product is safe at its maximum use

level and to evaluate potential contaminants in the product. … A toxicology evaluation of test results is required to determine if any contaminant concentrations have the potential to cause adverse human health effects. … NSF also requires annual testing and toxicological evaluation …. The NSF standard requires … toxicological evaluation."
Source: NSF 2008 Fact Sheet on fluoridation products. Available from: http://fluoride-class-action.com/wp-content/uploads/NSF-fact-sheet-on-fluoride-2008.pdf

"Basically, all available data on all aspects of toxicity are required to be included in the review eg. Acute toxicity (1-14 day exposure), subacute, subchronic, chronic, reproductive toxicity, developmental toxicity, immunotoxicity, neurotoxicity, genetic toxicity and human data."
Source: The National Health and Medical Research Council of Australia Review from 2003 describes the "minimum data requirements" for a chemical/contaminant risk assessment. Drew R, Frangor J. 2003 Overview of National and International Guidelines and Recommendations on the Assessment and Approval of Chemicals used in the Treatment of Drinking Water. A report prepared for the National Health and Medical Research Council's Drinking Water Treatment Chemicals Working Part, Commonwealth of Australia, by Toxikos Pty Ltd. Section 7.5.4 Risk Assessment, page 44.
http://www.google.ca/url?sa=t&source=web&cd=1&ved=0CBUQFjAA&url=http%3A%2F%2Fwww.nhmrc.gov.au%2F_files_nhmrc%2Ffile%2Fpublications%2Fsynopses%2Fwatergde.pdf&rct=j&q=Basically%2C%20all%20available%20data%20on%20all%20aspects%20of%20toxicity%20are%20required%20to%20be%20included%20in%20the%20review%20eg.%20Acute%20toxicity%20(1-14%20day%20exposure)%2C%20subacute%2C%20subchronic%2C%20chronic%2C%20reproductive%20toxicity%2C%20developmental%20toxicity%2C%20immunotoxicity%2C%20neurotoxicity%2C%20genetic%20toxicity%20and%20human%20data.&ei=9H9mTbyHJMi2tgfZ7LXmAw&usg=AFQjCNELoYtuyhYlcynKl1FjZlkGjApCMQ&cad=rja"

Health Canada

"The [NSF] standard requires a toxicology review to determine that the product is safe..."
Source: Petition #221 answer #3 and #35: Available from:
http://www.oag-bvg.gc.ca/internet/English/pet_lp_e_938.html

Prescribed Standard

Toxicology studies for fluoridation products are required for compliance with NSF Standard 60. Most provinces/territories (9 of 13), including Ontario, Northwest Territories, Alberta, Saskatchewan, Manitoba, Quebec, New Brunswick, Nova Scotia, Newfoundland and Labrador, have elected to adopt NSF Standard 60 as a legal requirement for products added to drinking water.

Survey of ASDWA Members Use of NSF Standards and ETV Reports, March 2010:
http://www.google.ca/url?sa=t&source=web&cd=1&sqi=2&ved=0CCMQFjAA&url=http%3A%2F%2Fwww.nsf.org%2Finfo%2Fasdwasurvey%2F&rct=j&q=Northwest%20Territories%20-%20NSF%20Standard%2060&ei=ZGRxTsbuKKGosAKZsNCNCQ&usg=AFQjCNEjWjWlm8skb6B0cqmL9tIOz9vBvA&cad=rja
"NSF/ANSI Standard 60: 47 states and 9 provinces/territories have legislation, regulations or policies

requiring or recommending drinking water treatment chemicals to comply with NSF/ANSI Standard 60." (see figure 1, page 1 for USA survey results and figure C-1, page 9 for Canada survey results)
p9
"9 of 13 Provinces/Territories require drinking water treatment chemicals to comply with the requirements of NSF/ANSI Standard 60". Yukon Territory, Nunavut, British Columbia, PEI do not require NSF Standard 60. (see Figure C-1)

Ontario

"[n]o person shall cause or permit any thing to enter a drinking-water system if it could result in … a contravention of a prescribed standard". [emphasis added]
Source: SDWA 21(1)(b)

"All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60 and NSF/61-" [emphasis added]
Source: Municipal Drinking Water Licenses (MDWL), Schedule B, Section 14, outline the standards required under SDWA 31(1)

Quebec

"Nul ne peut utiliser, pour le traitement de l'eau destinée à la consommation humaine, un produit chimique qui n'est pas certifié conforme à la la norme ANSI/NSF Standard 60, intitulée «Drinking Water Treatment Chemicals B Health Effects»" Règlement sur la qualité de l'eau potable
Loi sur la qualité de l'environnement, section 9.2.
http://www.google.ca/url?sa=t&source=web&cd=1&ved=0CBcQFjAA&url=http%3A%2F%2Fwww.mddep.gouv.qc.ca%2Feau%2Fpotable%2Freglement%2Frqep-refondu.pdf&rct=j&q=Nul%20ne%20peut%20utiliser%2C%20pour%20le%20traitement%20de%20l%E2%80%99eau%20destin%C3%A9e%20%C3%A0%20la%20%20consommation%20humaine%2C%20un%20produit%20chimique%20qui%20n%E2%80%99est%20pas%20certifi%C3%A9%20conforme%20%C3%A0%20la%20%20la%20norme%20ANSI%2FNSF%20Standard%2060%2C%20intitul%C3%A9e%20%C2%AB%20Drinking%20Water%20Treatment%20%20Chemicals%20B%20Health%20Effects%20%C2%BB%20publi%C3%A9e%20par%20l%E2%80%99organisme%20am%C3%A9ricain%20NSF%20%20International%20et%20par%20l%E2%80%99American%20National%20Standards%20Institute.&ei=oORoTrKeOsPbgQeg14TrDA&usg=AFQjCNETPSwf08bpJeGVSx4DqWqHIBfXVw&cad=rja

Alberta

"Any treatment chemicals added to a waterworks system must meet the National Sanitation Foundation (NSF) Standard 60 or be authorized by the Director."
Guide to Requirements for a Waterworks System Consisting only of a Distribution System:
http://www.google.ca/url?sa=t&source=web&cd=13&ved=0CCcQFjACOAo&url=http%3A%2F%2Fenvironment.gov.ab.ca%2Finfo%2Flibrary%2F6998.pdf&rct=j&q=Alberta%20NSF%20Standard

%2060&ei=U0SsTbPDBpCC0QHHten5CA&usg=AFQjCNF_9n4FWgJbpuPI5_ADq-7MVpw-OQ&cad=rja

Saskatchewan

A Guide to Waterworks Design (Saskatchewan Environment 2002)

Manitoba

Chlorine and Alternative Disinfectants Guidance Manual 2005, page 2-3

http://www.google.ca/url?sa=t&source=web&cd=3&sqi=2&ved=0CDIQFjAC&url=http%3A%2F%2Fwww.gov.mb.ca%2Fwaterstewardship%2Fodw%2Freg-info%2Fapprovals%2Fodw_chlorine_and_alternative_disinfectants.pdf&rct=j&q=Manitoba%20Recommended%20Standards%20for%20Water%20Works&ei=h_trTpH9CsqtgQf_08HXBQ&usg=AFQjCNFzWw6E_9gA3MDANh74lkA7LgSE2Q&cad=rja

> 2.1.5 Manitoba
> "The Office of Drinking Water applies the Recommended Standards for Water Works (GLUMRB 2003) or the Ten State Standards developed by the Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers for water system design, AWWA standards, and best practices."

The Drinking Water Safety Act 2004 C.C.S.M. c. D101
http://web2.gov.mb.ca/laws/statutes/ccsm/d101e.php?query=search

> section. 3: Every public water supplier and semi-public water supplier must comply with the drinking water quality standards specified in the regulations.

Ten States: Recommended Standards for Water Works 2007 Edition

Part 5 – Chemical Application

http://www.google.ca/url?sa=t&source=web&cd=4&sqi=2&ved=0CDgQFjAD&url=http%3A%2F%2Fwww.forceflow.com%2Fmedia%2Fregs%2F10StatesWTP2007.pdf&rct=j&q=Recommended%20Standards%20for%20Water%20Works&ei=m_trTuTKINGugQeIuuSFBg&usg=AFQjCNHMZb0bg4_o9BrekkoTj_CHiBbSpg&cad=rja

> 5.2.2 Specifications: Chemicals shall meet the appropriate ANSI/AWWA standards and/or ANSI/NSF Standard 60.

Atlantic Provinces

Atlantic Canada Guidelines for the Supply, Treatment, Storage, Distribution and Operation of Dirnking Water Supply Systems. Coordinated by the Atlantic Canada Water Works Association

(ACWWA) in association with the four Atlantic Canada Provinces. Sept 2004.
http://www.google.ca/url?sa=t&source=web&cd=5&sqi=2&ved=0CEUQFjAE&url=http%3A%2F%2Fwww.gov.ns.ca%2Fnse%2Fwater%2Fdocs%2FWaterSystemGuidelines.pdf&rct=j&q=new%20brunswick%20drinking%20water%20guidelines%20NSF%20Standard%2060&ei=HF1xTsL-MqK0sQKB1c3-CQ&usg=AFQjCNEGHfbRwn6_nC6mLgQGBpfk7myvcA&cad=rja
p4-55
4.10.2 Artificial Fluoridation
"Where artificial fluoridation is provided, a dosage (This is incorrect. They mean concentration) of 0.8 mg/L of fluoride is recommended and should not exceed 1.0 mg/L. Sodium fluoride, sodium silicofluoride and fluorosilicic acid may be used for fluoridation and should meet the applicable AWWA and **NSF standards**."

Northwest Territories

First Nations

Protocol for Decentralised Water and Wastewater Systems in First Nations Communities. By Aboriginal Affairs and Northern Development Canada, February 2010.
http://www.google.ca/url?sa=t&source=web&cd=7&sqi=2&ved=0CE4QFjAG&url=http%3A%2F%2Fwww.ainc-inac.gc.ca%2Fenr%2Fwtr%2Fdsp%2Fdsp-eng.asp&rct=j&q=Northwest%20Territories%20drinking%20water%20guidelines%20NSF%20Standard%2060&ei=B2JxTo2MF4eIsQKY1bDbCQ&usg=AFQjCNHy3ELore9hLE5HcM5u5iqoYRmAOw&cad=rja

"Health-based standards have been designed to safeguard drinking water by helping to ensure the material safety and performance of products that come into contact with drinking water. These types of standards are primarily developed by NSF Interntional/American National Standards Institute, and include: **NSF 60** – Drinking water treatment additives – Health effects"

Guidelines for the Review of Water and Wastewater Project Proposals in First Nations Communities South of 60○:
List of Relevant Guidelines and Standards
10. National Sanitation Foundation (NSF)
NSF Standard 60-Drinking Water Treatment Chemicals, Health Effects
http://www.google.ca/url?sa=t&source=web&cd=9&sqi=2&ved=0CF8QFjAI&url=http%3A%2F%2Fdsp-psd.pwgsc.gc.ca%2Fcollection_2008%2Fhc-sc%2FH34-169-2007E.pdf&rct=j&q=Manitoba%20-%20NSF%20Standard%2060&ei=IvdrTvElgfXSAaql4PIE&usg=AFQjCNEPmiEZjO3UjLma1J1mzzMxk-MULA&cad=rja

B. Do the fluoride products used for artificial water fluoridation satisfy these legal requirements?

Health Canada response in Petition #221 to Auditor General of Canada available from:
http://www.oag-bvg.gc.ca/internet/English/pet_lp_e_938.html

"Health Canada has not conducted toxicology studies on fluorosilicates."

Petitioner asked for "toxicology studies demonstrating safety of the fluorosilicate products used to fluoridate drinking water". Health Canada response: "A review of the toxicological literature on Sodium Hexafluorosilicate and on Fluorosilicic Acid conducted for the National Institute of Environmental Health Sciences."

National Institute Environmental Health Sciences 2001 Review shows that the toxicology studies required for NSF Standard 60 have not been done

9.1.4 Short-term and Subchronic Exposure: No data were available.
9.1.5 Chronic Exposure: No data were available.
9.1.7 Cytotoxicity: No data were available.
9.2 Reproductive and Teratological Effects: No data were available.
9.3 Carcinogenicity: No studies with sodium hexafluorosilicate or fluorosilicic acid were available.
9.4 Initiation/Promotion Studies: No data were available.
9.5 Anticarcinogenicity: No data were available.
9.7 Cogenotoxicity: No data were available.
9.8 Antigenotoxicity: No data were available.

Quebec Minister of Health and Social Services, Claude Lamarre, Freedom of Information response:

translation "No toxicology studies or toxicological evaluations on the chronic effects of fluoride products, which are required for [NSF] Standard 60 for each of the fluoridation products are available."
«Nous avons bien reçu votre demande d'accès pour recevoir copie des documents suivants; Ø [...] les études toxicologiques ou les évaluations toxicologiques sur l'exposition chronique effectuées sur les agents de fluoruration qui sont requises pour l'obtention du Standard 60 pour chacun des agents de fluoruration [...];
Source: Ministère de la Santé et des services sociaux (Monsieur Claude Lamarre) à la demande d'accès à l'information portant le N/Réf.: 1847 00/2010-2011.281

National Sanitation Foundation General Manager, Drinking Water Addities Certification Program, Stan Hazan

"NSF failed to follow its own Standard 60 procedures"

"I would say that the HFSA submissions have not come with the tox studies referenced."

QUESTION OF ATTORNEY: "Does NSF International do any testing to establish the efficacy of the fluoride-bearing compound for purposes of treating dental health or dental caries?"

"Not that I am aware of." *Source: 2004 Deposition by Stan Hazan, General Manager, Drinking Water Additives Certification Program, National Sanitation Foundation (NSF)*

"There have not been any studies on hydrofluosilicic acid or silicofluorides submitted to NSF under

claimed Confidential Business Information protection." *Source: NSF International letter to Honorable Ken Calvert, Chairman Subcommittee on Energy and the Environment, Committee on Science, U.S. House of Representatives dated July 7, 2000*

U.S. Environmental Protection Agency (EPA)

US EPA letter by Robert C. Thurnau, Chief, Treatment Technology Evaluation Branch, Water Supply and Water Resources Division dated Nov 16, 2000 to Dr. Roger Masters, Research Professor of Government, Dartmouth College, Department of Government, NH.

"To answer your first question on whether we have in our possession empirical scientific data on the effects of fluosilicic acid or sodium silicofluoride on health and behaviour, our answer is no."

"We have contacted our colleagues at NHEERL and they report that with the exception of some acute toxicity data, they were unable to find any information on the effects of silicofluorides on health and behaviour."

"In collecting the data for the fact sheet, EPA was not able to identify chronic studies for these chemicals." *Source: US EPA Letter to Honorable Ken Calvert, June 23, 1999.*

WHO IS RESPONSIBLE??? MUNICIPALITIES

1. Municipalities decide to implement artificial water fluoridation;
2. Municipalities choose the fluoridation product;
3. Municipalities buy the fluoridation product;
4. Municipalities put the fluoridation product into drinking water.

Justice Dennis O'Connor, 2002, Report of the Walkerton, Ontario, Canada Inquiry

> "Given that the safety of drinking water is essential for public health, those who discharge the oversight responsibilities of the municipality should be held to a statutory standard of care."

ONTARIO: Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils
http://guelph.ca/uploads/ET_Group/waterworks/Water%20Quality/Appendix%20A%20-%20Taking%20Care%20of%20Your%20Drinking%20Water_A%20Guide%20for%20Members%20of%20Municipal%20Councils.pdf

> "The Safe Drinking Water Act, 2002 includes a statutory standard of care for individuals who have oversight responsibilities for municipal drinking water systems that can extend to municipal councillors as of January 1, 2013. There are legal consequences for negligence, including possible fines or imprisonment." p3
>
> "Section 11 of the SDWA describes the legal responsibilities of owners and operating authorities of regulated drinking water systems." p6
>
> "Owners and operators are responsible for ensuring their drinking water systems: provide water that meets all prescribed drinking water quality standards operate in accordance with the Act

and its regulations," p6

"It is important that members of municipal council and municipal officials with decision-making authority over the drinking water system understand that they are personally liable, even if the drinking water system is operated by a corporate entity other than the municipality." p7

Conclusions

1.Toxicology studies are well-established and fundamental scientific protocols for determining the safety of products.

2. Toxicology studies are also a legal requirement in 9 out of 13 provinces and territories in Canada including Ontario, Northwest Territories, Alberta, Saskatchewan, Manitoba, Quebec, New Brunswick, Nova Scotia, Newfoundland and Labrador, which use NSF Standard 60 as a "prescribed standard".

3. The required toxicology studies have not been done on the fluoride products used in artificial water fluoridation

4. Fluorosilicates do not satisfy the safety requirements or the legal requirements ("prescribed standards") for drinking water in 9 out of 13 provinces.

5. The promotion of illegal products is also illegal. The promotion of products which are not safe is irresponsible and morally reprehensible.

6. No randomized, controlled human trials (RCTs) have been done using these products used in artificial water fluoridation for specific health purposes.

NOTE: photocopies of all letters and documents are available upon request.

C. Fluorosilicates Defined

1. Fluorosilicates are classified as "Hazardous Waste.

http://www.newmediaexplorer.org/chris/Clinch_2011_Fluorosilicates_are_Hazardous_Waste.pdf

Conclusion: There is no legislation in Canada which specifically permits the addition of hazardous waste (e.g., hexafluorosilicic acid) to drinking water.

2. Fluorosilicates are Toxic Substances recommended for "virtual elimination".

If you go to the Canadian Environmental Protection Act, Schedule 1, available from:
http://laws.justice.gc.ca/eng/C-15.31/page-9.html#anchorsc:1
you will find a list of what our Canadian Government deems to be "toxic substances" which are defined as persistent, bioaccumulative, toxic, and anthropogenic (man-made - hexafluorosilicic acid is man-made by-product from the smoke stack scrubbers of phosphate mining industries and other manufacturing facilities).
http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=0DA2924D-1

Inorganic fluoride is number 40. If you then consult the following quotes from various Canadian legislation:
http://www.newmediaexplorer.org/chris/Clinch_2009_Time_Line.pdf
you will see that a selected number of substances have been targeted for "virtual elimination" because of their extreme toxicity.

Conclusion: There is no legislation in Canada which permits the addition of "toxic substances" recommended for "virtual elimination" into drinking water.

3. Fluorosilicates are unregulated medications

The Supreme Court of Canada ruled (Toronto v Forest Hill 1957) that fluoridation is "compulsory preventive medication" used for "special health purposes."
http://www.newmediaexplorer.org/chris/Clinch_2009_Fluoride_is_Unregulated_Unapproved_Illegal_Drug_Health_Product.pdf

"Health Canada does not regulate hexafluorosilicic acid or sodium silicofluoride products, the actual products used in water fluoridation, which are allegedly used as a medical treatment to prevent dental disease."
http://www.newmediaexplorer.org/chris/Clinch_2011_Health_Canada_Downloads_Responsibility_Safety.pdf

Conclusion: There is no legislation in Canada which permits the addition of unregulated health products to drinking water.

D. Who Accepts Responsibility for the Safety of Fluoride Products?

The organizations who promote the use of fluoride products used in artificial water fluoridation claim no responsibility for their safety. They state that municipalities are responsible for:

1. the costs of artificial water fluoridation;
2. adverse health effects.

http://www.newmediaexplorer.org/chris/Clinch_2009_Who_Claims_Responsibility_for_Safety.pdf

The organizations and individuals who promote artificial water fluoridation claim that municipal governments are clearly responsible for public safety regarding fluoride products used in artificial water fluoridation because:

1. they decide to add fluoride products;
2. they choose the fluoride products (toxic substances and hazardous wastes);
3. they buy the fluoride products;
4. they add the fluoride products to the drinking water.

I refer you to the following article on calls for "fluoridegate" investigations in the USA:

http://www.justice.org/cps/rde/xchg/justice/hs.xsl/14815_14817.htm

E. MISREPRESENTATION OF FLUORIDE PRODUCTS:
Toxicity of “Natural” Calcium Fluoride vs “Man-Made” Sodium Silicofluorides

Promoters of artificial water fluoridation (see public health websites) discuss “natural fluoride” when discussing this policy. Naturally-occurring fluorides (e.g., calcium fluoride) do not have the same acute toxicity as the made-made fluorides used in artificial water fluoridation (e.g., Sodium Fluoride (NaF), Hexafluorosilsicic acid (H2SiF6) and Sodium Silicofluoride (Na2SiF6) are the two fluoride products most commonly used in artificial water fluoridation). Sodium fluoride is considerably more toxic than calcium fluoride.

	Acute Toxicity = Lethal Dose at which 50% of test subjects die Source: Merck Index 7th Edition
Calcium Fluoride	LD_{50} = 3,750 mg/kg
Sodium Fluoride	LD_{50} = 125 mg/kg

1. Natural calcium fluoride is found in nature and is not considered a toxic compound because of its comparatively high lethal oral acute dose in rodents where 50% of the animals die, as demonstrated in the Merck Index, 7th Edition (LD50 = 3,750mg/kg). Sodium fluoride has a comparatively low acute lethal oral doses in experimental animals, which is comparable to arsenic and lead[1] (LD50=125mg/kg). Fluoridation products such as sodium fluoride are considered lethal from between 1 to 5mg/Kg body weight.[2],[3] which is in contrast to calcium fluoride found naturally in water, considered lethal at about 5,000mg/Kg BW.[4]

2. Natural calcium fluoride does not have the same corrosive ability with metals in neutral or acidic waters, as do the man-made fluorides used in artificial water fluoridation.

3. Natural calcium fluoride also does not require neutralization with pH adjustment chemicals such as sodium hydroxide prior to injection into water, which now is a common practice for water districts. These pH adjustment chemicals add considerably to the costs of artificial water fluoridation, sometimes exceeding the costs for the fluoride products.[5]

In conclusion, fluoride ion from the fluoride products used in artificial water fluoridation are not biologically or even physico-chemically the same as the fluoride ion from natural calcium fluoride, for otherwise identical concentrations of ionized fluoride ion. Health Canada has based its regulatory guidelines (MAC levels) on the safer calcium fluoride existing in source water,[6],[7]without taking into consideration the calcium and magnesium levels (water hardness) or the duration of exposure. No government agency has demonstrated the bioequivalence of these various fluoride compounds. Therefore, no government policy decision which assumes their bioequivalence can be considered to be scientifically valid.

Citations

1 The Merck Index, 9th edition, Merck and Co., Inc., Rahway, New Jersey, 1976.

2 Table A: http://www.newmediaexplorer.org/chris/Table_A-Days_to_Reach_Acute_F_Intake_at_5mgperkgShortest.pdf

3 Akiniwa K. Re-examination of acute toxicity of fluoride. Fluoride 1997;30(2):89-104.

http://www.fluoride-journal.com/97-30-2/302-89.htm

4 Merck Index, 9th Edition, Merck and Co., Inc., Rahway, N.J. 1976, p 1663.

5 http://www.newmediaexplorer.org/chris/Clinch_2010_Costs_Artificial_Water_Fluoridation.pdf

6 Simonin P, Pierron A. 1937 Toxicite brute des derives fluores CR séances Soc Biol Fil 124: 133-134. From page 88 of Waldbott 1978. – “Calcium fluoride [CaF2] is 20 times less toxic than H2SiF6 or Na2SiF6” - “A comparison of lethal doses of fluorides in guinea pigs: Hydrofluorosilicic acid 200 mg/kg, Sodium fluorosilicate 250 mg/kg, Sodium fluoride 250 mg/kg. Calcium fluoride 5,000 mg/kg”

7 SCHER (Scientific Committee on Health and Environmental Risk). 2010. Critical review of any new evidence on the hazard profile, health effects, and human exposure to fluoride and the fluoridating agents of drinking water. European Commission. Directorate-General for Health & Consumers. May 18. “In fish and invertebrates, fluoride toxicity decreases with increasing calcium and chloride concentrations in the water. Decrease with calcium is mainly due to the formation/ precipitation of innocuous complexes such as Ca5(PO4)3F, CaF2 and MgF2.” Available from: http://www.ukcaf.org/schers_verdict_on_water_fluoridation.html