## Food and Beverage Sources of Fluoride Exposure

Compiled by
Maureen Jones and David C Kennedy, DDS,
Past President International Academy of Oral Medicine and Toxicology

Journal of Clinical Pediatric Dentistry; 16:38-40, 1991. Stannard JG et al. Fluoride levels and fluorides contamination of fruit juices. Forty-three ready-to-drink fruit juices were examined for fluoride ion concentration. The fluoride levels of the juices ranged from 0.15 to 6.80 (Gerber White Grape juice). It was found that 42% of the samples had more than 1 ppm of fluoride.

Given that increasing numbers of people are consuming beverages instead of water, fluoride supplementation should not be based solely upon the concentration of the drinking water, but should also consider the amount of different beverages consumed and their fluoride content.

Journal American Dental Association; 127: 895-901, 1996. Kiritsy, MC et al. Assessing fluoride concentrations of juices and juice-flavored drinks. In this study, the authors analyzed 532 juices and juice drinks for fluoride. Fluoride ion concentration ranged from 0.02 to 2.80 parts per million. Children's ingestion of fluoride from juices and juice-flavored drinks can be substantial and a factor in the development of fluorosis.

Journal American Dental Association; 128: 857-63, 1997. Heilman, JR el al. <u>Fluoride concentrations of infant foods.</u> In this study, the authors analyzed the fluoride concentration of 238 commercially available infant foods. Fluoride concentrations ranged from 0.01 to 8.38 micrograms of fluoride per gram, (ppm) with the highest fluoride concentrations found in infant foods containing chicken.

Journal American Dental Association; 130: 1593-99, 1999. Heilman, JR el al. <u>Assessing fluoride levels of carbonated soft drinks.</u> The authors examined the fluoride concentrations of 332 soft drinks. The fluoride levels of the products ranged from 0.02 to 1.28 ppm, with a mean level of 0.72. Fluoride levels exceeded 0.60 ppm for 71 percent of the products.

**Fluoride**; 30: 142-146, 1997. Burgstahler, AW et al. <u>Fluoride in California wines and raisins.</u> The water-extractable F content of five brands of California raisins varied from 0.83 to 5.20 ppm (mean 2.71 ppm). Elevated F levels in these wines and raisins appear to result from pesticide use of cryolite (Na3AlF6) in the vineyards.

Sequoia Analytical, Redwood City, Cal - May 1998.

Dole Pineapple juice	0.78 ppm
Lucerne 2% milk	0.72
Snapple	0.29
Coka Cola Classic	0.82
Hansens Soda	0.45
Minute Maid juice	1.20
Capri Sun juice	0.37
Gerber Strawberry juice	1.80
Horizon milk (organic)	0.22
Sunny Delight	0.31
Pepsi	0.37
Knudson Recharge	0.28
Gerber White Grape	3.50

Expert Chemical Analysis, Inc., San Diego Cal - June, 1998.

Gerber Graduates Berry Punch	3.00 ppm
Coca Cola Classic	0.98
Minute Maid Premium Orange juice	0.98
Kellogs Fruit Loops cereal	2.1
	mg/kilogram

Jupiter Environmental Laboratories, Inc., Jupiter, Fla - June, 1998

Gerber White Grape Juice	3.50 ppm
Gatorade Punch Concentrate	0.44
Diet Coke	1.12
Lipton Ice Tea	0.56
Sprite	0.73
Hawaiian Punch	0.85
Publix Orange Juice	0.79

Analytica Alaska Inc., Juneau, Alaska - September 1998.

Welch's White Grape Juice (conc.)	1.80 ppm
Coca Cola Classic	0.82

Northwest Testing Laboratories, Portland Oregon - July 1960.

Post's Grape Nuts cereal	6.40 ppm
Kellogg's Shredded Wheat	9.40
General Mill's Wheaties	10.10

Environmental Protection Agency (EPA) Dec. 5, 1997 to Nov. 21, 2001. <u>Pesticide Tolerance for residues of the insecticidal fluorine compounds cryolite and/or synthetic cryolite (sodium aluminum fluoride).</u>

Potatoes, on or in	2.00 ppm
Processed potato waste for animal feed	22.00

Aug. 1997, proposed tolerances for residues of cryolite and/or synthetic cryolite:

Cabbage	45.00 ppm
Citrus fruits	95.00
Collards	35.00
Eggplant	30.00
Lettuce, head	180.00
Lettuce, leaf	40.00
Peaches	10.00
Raisins	55.00
Tomatoes	30.00
Tomato paste	45.00