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Green Tea: A Healthy Choice?

My objective was to learn if green tea really contains fluoride, if the amount fluctuates based on leaf surface area, and if fluoride levels are unsafe for human consumption. I researched how fluoride gets into tea plants, how to test for fluoride, and how much fluoride is too much. I tested three green teas: two from China, and one from Japan. I tested each sample in whole, chopped, and powdered leaf form. My goal was to simulate the brewing process for a typical cup of tea that a consumer would use following typical package directions. This meant my samples were based on volume, not weight. Each 5 cc (one teaspoon) sample was steeped for 2 minutes in 235 ml (8 oz) of distilled water heated to 76.7°C (170°F). The 9 samples were taken to a local lab for testing. The fluoride level results in my samples ranged from 7 mg/liter to 43 mg/liter. The Chinese whole leaf samples contained the least fluoride, ranging from 7 mg/liter to 10 mg/liter. The Japanese samples contained the most fluoride, ranging from 28 mg/liter to 43 mg/liter. All Chinese samples were safe for human consumption. A single cup of the Japanese whole leaf or powdered sample equaled the recommended daily upper intake level of 10 mg for fluoride. I learned that green tea contains fluoride and the amount changes based on leaf surface area and type of tea. The FDA should test fluoride in tea and set safety standards. A person could accidentally drink too much fluoride in their green tea.