Introduction

These briefing materials have been prepared to provide background acrylamide information to the Subcommittee Members before the Contaminants and Natural Toxicants Subcommittee Meeting that will be held on December 4 and 5, 2002. The purpose of this meeting is to discuss FDA's action plan for addressing the issue of acrylamide in food and to seek the Subcommittee's advice and recommendations on it.

The discovery of acrylamide, a potential cancer-causing agent, in a variety of foods during cooking has raised much concern. On April 24, 2002, researchers at the Swedish National Food Administration and Stockholm University reported that acrylamide formation is particularly associated with carbohydrate-rich foods that are oven-baked or fried at high temperatures. Since the Swedish report, similar findings have been reported by Norway, the United Kingdom, and Switzerland. Preliminary analysis by the FDA also supports these findings. Recent findings suggest that one mechanism governing acrylamide formation may involve asparagine and glucose or other reducing sugars. Since acrylamide is a potential human carcinogen and genotoxicant, the formation of acrylamide in foods is a significant potential health concern. It is not known if there is a direct link between acrylamide in food and cancer in humans. Further research into the Toxicology, Formation, Occurrence, and Exposure will assist FDA in adequately evaluating the potential human risk of acrylamide.

FDA has developed an action plan to address the many public health questions that these new findings have raised. The action plan outlines FDA's goals and planned actions on the issue of Acrylamide in food. Some of these goals include:

- ?? Developing rapid screening methods and validating confirmatory methods of analysis.
- ?? Assessing the dietary exposure of U.S. consumers to acrylamide by measuring acrylamide levels in various foods.
- ?? Assessing the potential risks associated with acrylamide in foods by extensive evaluation of the available information and by expanding research into acrylamide toxicology.
- ?? With partners, identifying mechanisms responsible for the formation of acrylamide in foods and identifying means to reduce acrylamide exposure.
- ?? Informing and educate consumers and processors about the potential risks throughout the assessment process and as knowledge is gained.
- ?? Developing and foster public/private partnerships to gather scientific and technological information and data for assessing the human risk.

The action plan also includes a timeline of planned meetings, FDA's intentions to work with other federal agencies, and FDA's intentions to participate in international efforts. The FDA seeks the Subcommittee's input on this action plan, as this document will guide FDA's activities on the issue of acrylamide over the next several years.