

Extruded Pasta

Formula

Semolina*	100 grams
Water	31.5 grams

*Note: Semolina is a coarse milled product made from durum wheat.

Procedure

1. A sample of semolina is weighed and placed in a mixing bowl.
2. Semolina is mixed at low speed as water is added over a 30-second period and then mixed at high speed for 4 minutes to form a dough.
3. The dough is transferred to the extruder and extruded into pasta product.
4. The extruded pasta product is cut to length and dried.

Results

- Extruded pasta is evaluated for processing performance, texture, color, external characteristics, and cooking qualities. The results are expressed as a numerical score based on comparison to a control sample.
- Processing performance is determined for dough strength and extensibility.
- External characteristics are determined for surface smoothness and appearance, including color, clarity, specks, and cracks.
- Cooked pasta is evaluated by sensory analysis for cooking qualities, such as firm bite (“al dente”), non-stickiness, flavor, and mouthfeel.
- Texture can be determined with an instrument test; for example, the TA.XT2 Texture Analyzer (similar to Asian noodle texture test; see page 66).



Different pasta shapes.

Why is this important?

Processing conditions can be optimized with the extruded pasta test prior to commercial-scale operations. Final product attributes, such as stickiness, texture, and color, can be predicted on small-scale equipment.

Strength and extensibility of dry pasta is a key factor in pasta production since the product must be mechanically strong to maintain its size and shape during cutting, packaging, handling, and shipping.

Preferred characteristics of extruded pasta, such as color and texture, are determined by consumer desires and expectations.

Adapted from Method 66-41, Approved Methods of the American Association of Cereal Chemists, 10th Edition. 2000. St. Paul, MN.