

# Mixograph

## Method

1. A sample of 35 grams of flour on a 14 percent moisture basis is weighed and placed in a mixograph bowl.
2. Water is added to the flour from a buret and the bowl is inserted into the mixograph.
3. The flour and water are mixed together to form a dough.
4. As the dough is mixed, the mixograph records a curve on graph paper.

## Results

- The mixograph determines dough and gluten properties of a flour by measuring the resistance of a dough against the mixing action of pins.
- Mixograph results include water absorption, peak time, and mixing tolerance.
- The mixograph curve indicates gluten strength, optimum dough development time, mixing tolerance (tolerance to over-mixing), and other dough characteristics.
- The amount of water added (absorption) affects the position of the curve on the graph paper. Less water increases dough consistency and moves the curve upward.
- Mixograph curves are described on pages 42 to 43.

## Why is this important?

The mixograph test quickly analyzes small quantities of flour for dough gluten strength. Wheat breeders use mixograph results to screen early generation lines for dough gluten strength. Flour water absorption measured by the mixograph often serves as bake absorption in bread baking tests.



*Mixograph mixer.*

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- **Recording dough mixer**
  - **Measures flour water absorption and dough mixing characteristics**
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