

# BREADMAKING III | BREAD FAULTS

## INFORMATION SHEET



BAKING INDUSTRY  
RESEARCH TRUST

### PROCESSING

It is important to be methodical when trying to determine the cause of a fault. Sometimes there may be more than one cause and these may interact with each other. It is best to try to solve the fault by one change at a time rather than making changes to ingredients, processing and handling all at once. Possible causes of faults in bread can be grouped into five main categories:

1. Defective or inappropriate ingredients
2. Unbalanced formulation
3. Poor dough development and maturity
4. Incorrectly adjusted or poorly maintained equipment
5. Poor handling after baking.

### IDEAL CHARACTERISTICS FOR A LOAF OF BREAD

The ideal characteristics for a standard loaf of bread are:

- Even top with slightly rounded corners
- Smooth thin crust, with no holes, streaks, cracks or wrinkles
- Uniform golden brown crust; rim of crust is pale
- Fine crumb, uniform cell structure, thin cell walls, texture soft to touch.

### BREAD FAULTS FOR BREAD MADE USING MECHANICAL DOUGH DEVELOPMENT METHOD

CHARACTERISTIC	FAULT	CAUSE
VOLUME	Too small	Work input too high for the type of flour used Weak flour Cold dough Tight dough Not enough yeast, dough conditioner or emulsifier Short intermediate proof Short tin proof Too much moulding pressure Too much salt Under-developed (for strong flour)
	Too large	Hot dough Slack dough Long intermediate or final proof Too much yeast Very strong flour
CRUST	Bubbles	Wrong dough conditioner Final proof too long & humid Too much pressure during moulding Slack dough
CRUST COLOUR	Pale	Not enough sugar Cool oven
	High	Too much sugar or malt Too much salt Hot oven Defective yeast
CRUST TEXTURE	Flying top	High
	Torn and ragged	High
	Shiny	Over-developed
LOAF FORM	Too bold, excessively rounded corners	Under-developed
	Lack of boldness, flat top, sharp corners	Over-developed Under-oxidised

CRUMB	Doughy	Too much malt Flour made with sprouted wheat Under-baked
	Dry	Over-baked Lack of dough conditioners
CRUMB TEXTURE	Coarse and open	Weak flour Long intermediate and tin proof Not enough or wrong dough conditioner Not enough vacuum
	Close and tight	Short tin proof Defective yeast Tight dough Too much vacuum
	Irregular cores or streaks	Too much moulding pressure
CRUMB COLOUR	Dark	Bran in flour Dough too hot
	Yellow	Wheat type

### BREAD FAULTS FOR BREAD MADE USING BULK FERMENTATION METHOD

CHARACTERISTIC	FAULT	CAUSE
VOLUME	Too small Maybe with flying top	Short tin proof Tight dough Over-mature dough Too much moulding pressure Green dough caused by low dough temperature Not enough sugar or malt – sometimes a pink tinge can be seen in the crumb Too much salt Weak flour
	Too large	Over-proof
CRUST COLOUR	Pale	Over-mature dough Not enough sugar or malt Heavy moulding Cool oven
	High	Green dough Too much sugar or malt Too much ammonium chloride or salt Hot oven
CRUST TEXTURE	Flying top	Short tin proof
	Torn and ragged	Over-mature dough Heavy moulding
	Shiny	Green dough
LOAF FORM	Too bold, excessively rounded corners	Excessive maturity Tight dough Short tin proof
	Lack of boldness, flat top, sharp corners	Green dough Slack dough Excessive tin proof
	Sharp ragged break	Green dough Tight dough
CRUMB	Doughy	Excessive malt Flour made with sprouted wheat Under-baked
	Dry	Over-baked Lack of dough conditioners

<b>CRUMB TEXTURE</b>	Coarse and open	Green dough Over-proof Slack dough Cool oven – causing excessive gassing after loaf has set
	Irregular cores or streaks	Over-mature dough Too much moulding pressure
	Tight crumb	Under-proof Tight dough
<b>CRUMB COLOUR</b>	Greyish	Over-mature dough
	Yellowish	Green dough
<b>AROMA</b>	Acid	Hot dough Over-mature

## REFERENCES

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