

> INFORMATION SHEET

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
	Too large	Under-developed (for strong flour) 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

Breadmaking 3 - Bread Faults

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

BREAD FAULTS FOR BREAD MADE USING BULK FERMENATATION METHOD

CHARACTERISTIC	FAULT	CAUSE
VOLUME	Too small Maybe with flying top Too large	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 Over-proof
CRUST COLOUR	Pale High	Over-mature dough Not enough sugar or malt Heavy moulding Cool oven Green dough Too much sugar or malt Too much ammonium chloride or salt Hot oven
CRUST TEXTURE	Flying top Torn and ragged	Short tin proof Over-mature dough Heavy moulding
LOAF FORM	Shiny	Green dough

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LOAF FORM	Too bold, excessively rounded corners Lack of boldness, flat top, sharp corners	Excessive maturity Tight dough Short tin proof Green dough Slack dough Excessive tin proof
CRUMB	Sharp ragged break Doughy	Green dough Tight dough Excessive malt Flour made with sprouted wheat Under-baked
CRUST COLOUR	Dry	Over-baked Lack of dough conditioners
CRUMB TEXTURE	Coarse and open Irregular cores or streaks Tight crumb	Green dough Over-proof Slack dough Cool oven – causing excessive gassing after loaf has set Over-mature dough Too much moulding pressure Under-proof Tight dough
CRUMB COLOUR	Greyish Yellowish	Over-mature dough Green dough
AROMA	Acid	Hot dough Over-mature

REFERENCES

Bread Research Institute of Australia 1989. Australian Breadmaking Handbook. Chapter 8 Bread faults and their correction. Tafe Educational Books. Pp. 99–107.

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