

## Internal Characteristics

The most important internal characteristic of a loaf of bread is the crumb structure. This is broadly divided into grain and texture.

**Grain:** Cell structure of the loaf is known as grain. A fine silky grain is one in which cells are small and uniform, elongated, rather than round and the cell walls are thin. A coarse grain is one in which the cells are large and the cell walls are thick.

**Texture:** Texture is actually the feel of the surface of the interior of the loaf when cut and sliced. Thus, a desirable texture may be classified as velvety, silky, soft and elastic. An inferior texture is often described as rough, hard, doughy, crumbly and lumpy. The texture of a loaf is determined by pressing the fingers against and rubbing them across the cut surface of the loaf.

**Colour of crumb:** A coarse grain slice will appear darker in colour and a fine grain slice whiter even though both loaves were made with identical ingredients. Thick heavy cell walls due to young dough give the crumb a little tan colour. Open grain causes shadows which give the crumb a grayish colour. The colour of the crumb should be bright without any dark patches.

**Aroma:** The aroma of a loaf is determined by carefully smelling it. The aroma may be described as wheaty, sweet, musty, rancid, moldy, sour or flat. The ideal loaf has a pleasant wheaty and fermentation aroma.

**Taste:** The aroma and taste of a loaf are closely related characteristics. Taste is actually the taste of the loaf when eaten. It can be described as wheaty, sweet, sour, flat or rancid.

## External Characteristics

**Volume:** Volume is an important consideration in consumer acceptance. The greater the volume of the bread, the softer the loaf appears when squeezed with hands. A loaf of excessive volume will generally have open grain and weak texture while the one with a low volume exhibits rough grain and honey comb texture. Volume is influenced by ingredients and processing.

**Colour of crust:** The colour of the crust is also termed as 'bloom'. The desired colour is one with an appetizing golden brown shade. Crust colour is the result of caramelization of sugars and is also due to the browning reaction due to interaction of protein and reducing sugar. The colour of crust is mainly dependent on the amount of sugar present in the dough when baked and temperature at which the loaf is baked.

**Evenness of bake:** This means that the loaf has been made with a uniformity of bake on all sides. Factors like correct proofing, controlled oven conditions as well as the proper distance between the pans during baking affect evenness of bake.

**Symmetry of form:** The shape or symmetry of the loaf influences the customers to a great extent.

**Break and shred:** The break and shred of a loaf have an important bearing on the general appearance of the loaf. An even-shredded break is desirable on the sides and ends of open top bread. The break should not be excessive to the extent that the top crust separates from the sides of the loaf forming crust. Faulty bread may show any of these faults wild break, lack of attractive shred, shell top, no break or insufficient break.

**Character of crust:** The bread crust should be thin and crisp. It should not be thick, tough or rubbery.