

Application Data

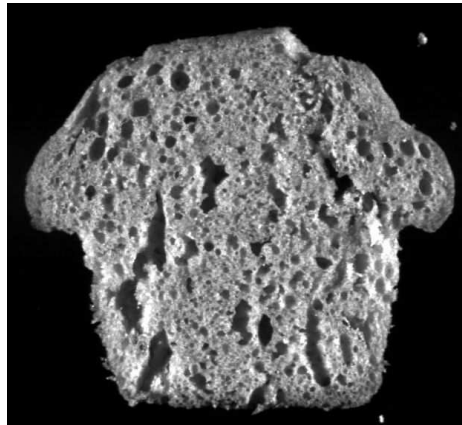
Measuring the characteristics of cake Muffins

Description

As C-Cell is designed to measure the characteristics of bakery products with cellular structures it can be used to provide objective data on plain (non-fruited) cake muffins. It provides a permanent record of product quality which can be used in quality optimisation and for evaluating the effects of ingredient and recipe changes.

Data

C-Cell measures up to 48 different parameters. You can use subsets of these 48 parameters to make quality assessments according to your own needs. Combinations of parameters may be used to provide a single objective product score.



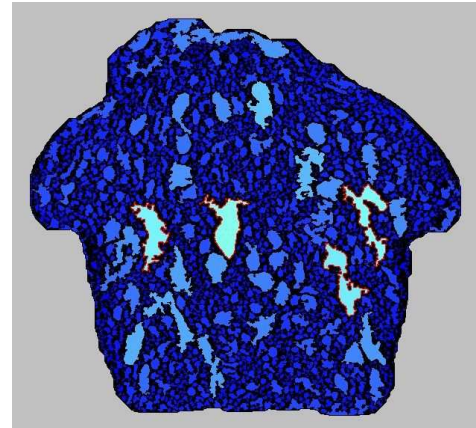
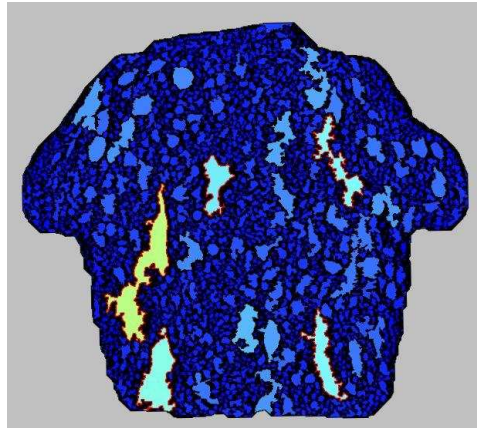
Some of the shape and cell data which can be used to provide an objective record of muffin quality include;

Maximum slice height
Number of cells
Average cell wall thickness
Cell angle to the vertical

Slice area
Area of holes (%)
Cell elongation

Cell Images

The individual cells within the slice image are identified and variations in cell sizes are colour coded; small cells are coloured dark blue and larger ones are shown in lighter shades of blue, green and yellow. Cells walls are indicated by black lines. Features considered to be holes (a characteristic of cake Muffins) are outlined in red.

**Muffin left****Muffin right**

Slice area (mm²)	4228	4313
Maximum slice height	72.0	75.2
Brightness	65.8	65.6
Number of cells	3604	3578
Area of holes (%)	6.37	3.85
Avg cell wall thickness (mm)	0.413	0.415
Cell elongation	1.45	1.45
Cell angle to vertical (°)	- 3.3	- 11.9

A minus sign for cell angle indicates that the overall alignment of the cells is to the left of vertical, no sign indicates an overall alignment to the right of vertical. In the example shown above the cell angle indicates that the muffin on the right is slightly larger, has a smaller area associated with holes and leans more towards the left (e.g. because of a change in baking conditions).

More information is available from:

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