

Application Data

Evaluating cakes and laminated pastries

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) cakes of different types and sizes and also laminated pastries. It provides a permanent record of product qualities which can be used in quality optimisation and for evaluating the effects of recipe and process changes.

Data

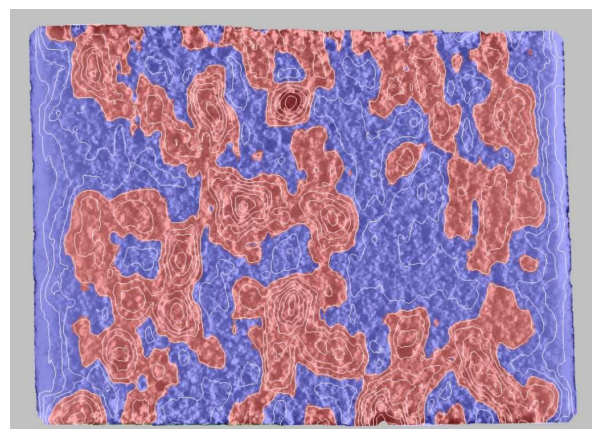
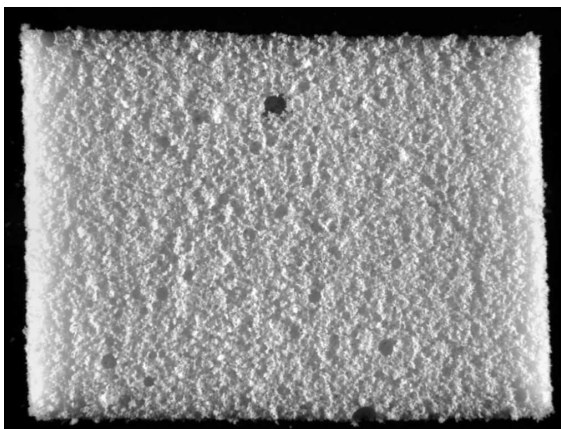
C-Cell measures up to 48 different parameters. The choice of useful subsets of these 48 parameters will vary according to product being assessed. Combinations of parameters may be used to provide a single objective product score.

Images

The processed images provide valuable visual information about the quality parameters

Shape and cell data Some of the shape and cell data can be used to provide an objective record of cake quality, possible parameters include;

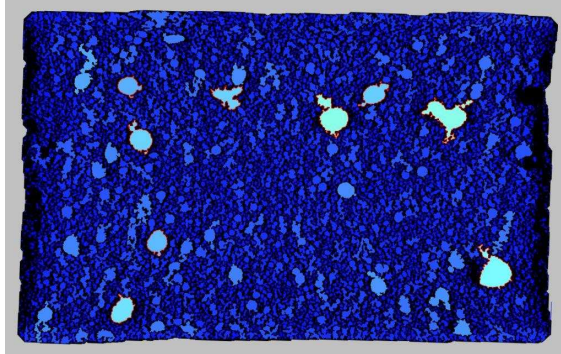
- Slice area**
- Brightness**
- Average cell diameter**
- Slice height**
- Number of cells**
- Coarse/Fine clustering**



Slice height (mm)	99.3
Cells/unit area	0.56
Average cell diameter	3.479
Coarse/fine clustering	0.034

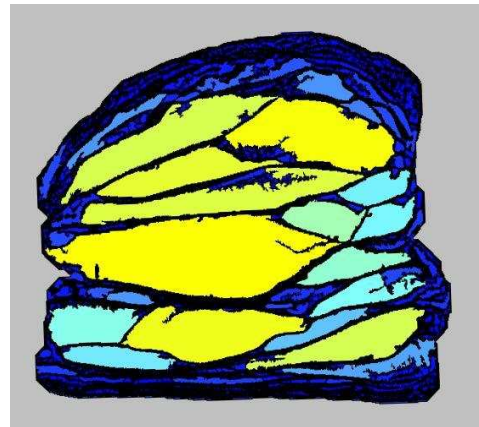
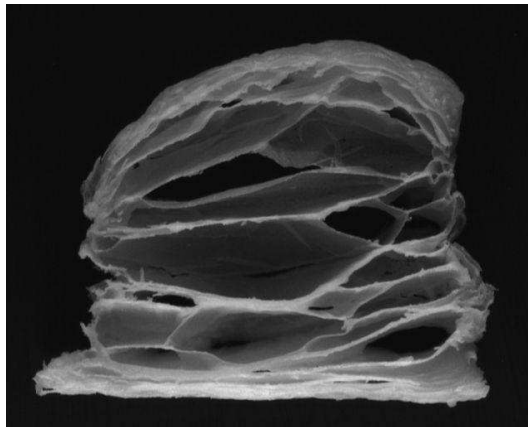
Clustering image Areas of the slice dominated by larger cells are coloured pink while areas dominated by smaller cells are in blue. A low coarse/fine clustering number indicates a uniform cell distribution

Quantifying holes in cake slices: The individual cells with 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.



Number of cells	10148
Number of holes	9
Area of holes (%)	3.04

Quantifying pastry structures:



Maximum height	61.4
Number of cells	1448
Average cell diameter (mm)	14.0
Cell angle to the vertical (°)	81.6
Average cell elongation	2.38

The cell angle to the vertical is related to the layering in some laminated products, high numbers indicate that the cells are more horizontal.

More information is available from:

CALIBRE CONTROL INTERNATIONAL LTD

5/6 ASHER COURT, LYNCastle WAY, APPLETON, WARRINGTON WA4 4ST, UK

T: +44 1925 860401 F: +44 1925 860402 E-mail: info@calibrecontrol.com

www.calibrecontrol.com

www.c-cell.info