

AMBERTEC

Beta Formation Tester

Description

Formation (i.e. the small scale variation of basis weight) is one of the most important factors of paper quality because it has an effect on practically all the other properties of paper.

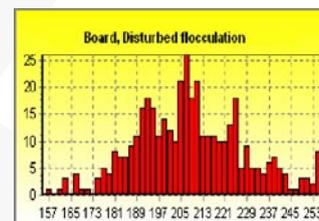
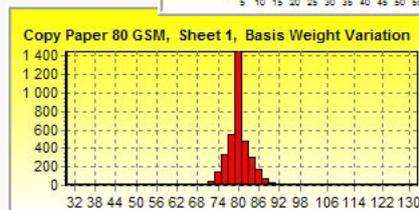
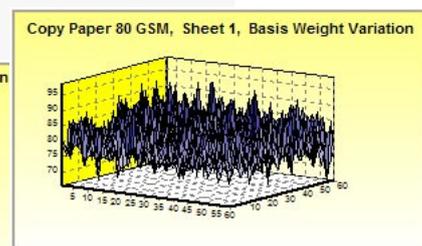
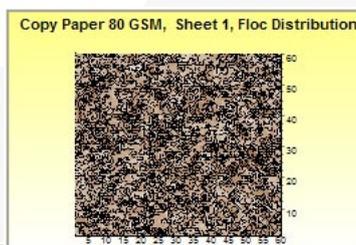
The AMBERTEC Beta Formation Tester allows more accurate measurement of formation than any tester based on optical methods because it is independent on any variations in the optical properties of the sheet caused by furnish composition (fibre, filler, color, coating) or by process variables (beating, wet pressing, calendering). It is even possible to measure the formation of printed samples which is totally impossible with any optical formation tester.

Samples of different paper grades, produced by different processes using different raw materials can directly be reliably compared. Results from various research projects show good correspondence between beta formation, strength, porosity and printability of paper.

AMBERTEC Beta Formation Tester has been designed to measure automatically cross-directional sample strips or sample sheets: simply load in the sample and press start button. In the default routine measurement sample basis weight is measured at 400 points over an area of 70 x 70 mm within less than 5 minutes. After completed measurement the results are stored into a database and sent automatically to mill computer or network printer.

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The Superior Beta Formation Method		
	AMBERTEC	OPTICAL
Accuracy	EXCELLENT	POOR
Calibration	YES	NO
Paper grades	ALL	LIMITED
- calendered	YES	NO
- coloured	YES	NO
- coated	YES	NO
- printed	YES	NO
- thick sheets	YES	LIMITED



Technical specifications

Operation principle:	Beta radiation absorbency. Stepping scanner (specimen is stationary during determination).
Basis weight range:	0 – 350 g/m ²
Precision of basis weight determination:	Constant precision (selectable); basis weight level independent
Sample type:	Single or multiple sheets, CD profile strips
Width of sample:	210 mm max (ISO A4 format sheet)
Measuring area:	Default measuring area 70 x 70 mm Selectable; width 70 mm max, length up to length of the sample
Distance between measuring points:	3,5 mm (default). Freely selectable in both X- and Y-directions
Number of points per measurement:	400 (default), selectable
Measuring aperture:	1 mm in diameter
Source of radiation:	Pm-147 sealed point source with nominal activity of 185 MBq (5 mCi)
Electrical:	230 VAC / 50 Hz and 110 VAC / 60 Hz, 10 VA (without the PC)
Dimensions (without the PC):	450 mm (width) x 300 mm (length) x 440 mm (height)
Weight (without PC):	20 kg
Shipping dimensions:	800 mm (width) x 600 mm (length) x 530 mm (height)
Shipping weight (without PC):	43 kg
NOTE!	For the possession and use of the radiation source, a license is required from the local authorities for radiation safety. The source is placed inside the tester in such a way that no radiation will leak outside the measuring gauge. The user shall not be exposed to radiation and no personal radiation dosimeter is needed.