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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

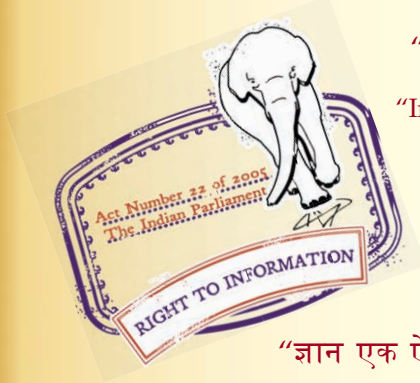
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6213-16 (1978): Methods of test for pulp, Part 16: Dirt count [CHD 15: Paper and its products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS : 6113 (Part XVI) - 1978

(Reaffirmed 2009)

Indian Standard

METHODS OF TEST FOR PULP

PART XVI DIRT COUNT

UDC 676.1 : 676.019.172



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INDIAN STANDARDS INSTITUTION
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NEW DELHI 110002

Indian Standard

METHODS OF TEST FOR PULP

PART XVI DIRT COUNT

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Indian Standard

METHODS OF TEST FOR PULP

PART XVI DIRT COUNT

0. FOREWORD

0.1 This Indian Standard (Part XVI) was adopted by the Indian Standards Institution on 20 November 1978, after the draft finalized by the Paper and Its Products (Excluding Packaging Materials) Sectional Committee had been approved by the Chemical Division Council.

0.2 For obtaining good quality of paper, it is essential that pulp which goes into the manufacture of paper is clean and free of dirt. This method gives a comparative value of the dirt count of different pulp samples and is used to evaluate the pulps for their cleanliness and the nature of both inherent and obvious dirt.

0.3 In the preparation of this standard assistance has been taken from TAPPI 213 ts-65 published by Technical Association of the Pulp and Paper Industry of USA.

0.4 In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960*.

1. SCOPE

1.1 This standard (Part XVI) prescribes the method for numerical estimation of dirt in pulp.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definition shall apply.

2.1 Dirt in Pulp — Dirt in pulp is defined as a foreign matter in the pulp that has a marked contrasting colour to the rest of the sheet when viewed at more than one angle in reflected light and having equivalent black area of 0.04 mm^2 and more.

*Rules for rounding off numerical values (*revised*).

3. APPARATUS

3.1 Standard Disintegrator and Buchner Funnel — The disintegrator consists of a cylindrical metal container in which a three-blade propeller driven by a 200-watt motor revolves in the centre. The speed of the propeller should be 3 000 rev/min. On the inside surface of the container are 4 equally spaced, gun metal spiral baffles so arranged as to oppose any tendency for the pulp to be thrown out by centrifugal action. The cylinder can be removed for emptying purposes by raising the propeller shaft through its bearing.

3.2 Standard Dirt Chart*

4. PROCEDURE

4.1 Take a representative sample or slush pulp and form into specimen sheets on filter paper in buchner funnel. Make sufficient number of sheets with a basis weight of about 200 g/m² so that they have an exposed area of about 400 cm² on both sides together (2 sheets of 125 mm in diameter). Dry the sheets in any convenient manner, taking care to avoid contamination. Hold the sheet in one hand and hold an edge of the standard dirt chart with the other, after scratching each speck with the cover of the chart to make sure that it is not a piece of loose outside dirt. Compare the dirt to estimate the *eba* (equivalent black area) on both sides of the sheet and total the *eba* in mm².

5. CALCULATION

5.1 The total *eba* is in mm² multiplied with a factor to obtain *eba* per square metre from the area of the sheets measured. When an area of 400 cm² is measured for dirt, multiply by 20.38. This gives the dirt count as mm²/m² or ppm.

6. REPORT

6.1 Report the dirt in pulp in terms of mm²/m² of *eba* to two significant figures and also the number of specks per square metre.

*Information on the availability of the standard dirt chart may be obtained, from Indian Standards Institution, New Delhi.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous Intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>	<i>Conversion</i>
Force	newton	N	1
Energy	Joule	J	1 N = 0.101 972 kgf
Power	watt	W	1 J = 1 N.m
Flux	weber	Wb	1 W = 1 J/s
Flux density	tesla	T	1 Wb = 1 V.s
Frequency	hertz	Hz	1 T = 1 Wb/m ²
Electric conductance	siemens	S	1 Hz = 1 c/s (s ⁻¹)
Pressure, stress	pascal	Pa	1 S = 1 A/V 1 Pa = 1 N/m ²

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