

# elcometer® **Taber® 5130 and 5150 Rotary Abraser**

Can be used in accordance with:

ASTM	C217; C241; C501; C1353; D1044; D3389; D3884; D4060; D4158; D5342; D5650; F362; F510; F1478
DIN	52347; 53109; 53754; 53799; 68861 T2
EN	438-2
FEDERAL	TT-C-542; TT-E-487A; TT-P-85C; TT-P-87B; TT-P-91B; TT-P-95A; TT-P-141B
FTMS	CCC-T-191 (Methods 5306 & 5309); GG-P-455B
ISO	5470; 9352
ISO/DIS	3537; 4586-2; 7784-2
JIS	A1453; K7204; L-P-406(Method 1091); P8125
MILITARY	MIL-A-8625; MIL-C-13495A; MIL-I-43553A; MIL-M-13231C; MIL-P-18493; MIL-T-28800C
NF	B51-282
SAE	J365; J948; J1530
SIS	923509
TAPPI	T476; T489; T566



The Taber® Abraser is one of the world's most widely used test instruments for determining the durability of products that include plastics, paper, textiles, leathers and of course paint. Accelerated wear test procedures using the Taber® Abraser have been written into many test specifications for ASTM, ISO, NEMA, TAPPI, DIN, ASE, EM, MIL, NF, JIS and UNE - as well as automotive manufacturing procedures around the world.

The Taber® Abraser is an industry standard used in the wear and durability testing of ceramics, plastics, textiles, metals, leather, rubber and painted, lacquered and electroplated surfaces.

## The Taber® Abraser is available in three different models

The **Taber® 5130 (110 Volts) & 5131 (230 Volts)** with a single test head or the **Taber® 5150 (110 Volts) & 5151 (230 Volts)** with dual testing heads, which allow the user to test two different or identical materials, simultaneously, for comparison and contrast - doubling the productivity of the operator. A linear abramer is also available **Taber® 5700**, for testing small items.

In order to customise the test to your requirements, choose from a wide variety of abrading wheels and abramer accessories to simulate real-life wear conditions.

### Each Taber® Abraser includes:

- Auxiliary weight - 1000g load
- Specimen holder, 43" OD (E-100-125)
- Hex wrench
- Calibrase® wheel set (CS-10)
- Vacuum unit with suction hose and round brush
- Auxiliary weight - 500g load
- Hold down ring (E-100-101)
- Refacing discs, 100pcs (S-11)
- Hand brush (S-12) Calibrade® wheel set (H-18)
- Instruction manual



## Technical Specifications

Model	Description	Part Number
Elcometer 5130	Single Head Abraser Set (115V, 60Hz)	ST985130-5
Elcometer 5131	Single Head Abraser Set (230V, 50Hz)	ST985131-1
Elcometer 5150	Dual Head Abraser Set (115V, 60Hz)	ST985150-5
Elcometer 5151	Dual Head Abraser Set (230V, 50Hz)	ST985151-1
<b>Accessories</b>	Sample Cutter - cuts your sample to the exact shape for the rotary abramer	ST985000

A Grit Feeder Attachment and a range of other accessories for the Taber® Abrasers are available.

Please contact BAMR for further information.

## Test Method – Abrasion

### The Unique Abrasion Process

A unique 'X' pattern of abrasion is produced by the rotary rub/wear action of the wheels. Wear action occurs as the wheels are turned by the rotating sample. An area of 30 square centimeters is subjected to wear at any one time, and a complete circle of the material surface is abraded at all angles of grain or weave.

In order to customise the test to your requirements, choose from a wide variety of abrading wheels and abramer accessories to simulate real-life wear conditions.

### Changing the abramer wheels and change the test! - Selecting the Abrading Wheels

The choice of abrading wheels for the Taber® 5130/5131 and 5150/5151 should be based upon the wear the specimen material will be subjected to in everyday use.

Taber® Abrading Wheels are available in five levels of abrasiveness to suit a wide range of material testing applications. Wool felt or plain rubber wheels test the delicate materials or the abrasiveness of materials such as dental powders. Wheels which feature abrasive particles in a resilient matrix of rubber or a hard matrix of vitrified clay are suitable for stiffer materials.

- **Calibrase®** - a resilient wheel composed of rubber and aluminium oxide abrasive particles
- **Calibrade®** - a non-resilient wheel composed of vitrified clay and silicon carbide abrasive particles
- **Wool Felt** - contains no abrasive particles
- **Plain Rubber** - contains no abrasive particles unless used with sandpaper strips
- **Tungsten Carbide** - severe cutting and tearing action with helical teeth for use on resilient materials such as rubber, leather or floor coverings.

### Abrading Wheels Selection Chart

<u>Model</u>	<u>Type</u>	<u>Composition</u>	<u>Load range (grams)</u>	<u>Abrasive action</u>
<b>CS -10F</b>	Resilient	Rubber and Abrasive Grain	250 - 500	Very Mild
<b>CS -10</b>	Resilient	Rubber and Abrasive Grain	500 - 1000	Mild
<b>CS -17</b>	Resilient	Rubber and Abrasive Grain	500 - 1000	Harsh
<b>H -10</b>	Non-Resilient	Vitrified Clay	500 -1000	Coarse
<b>H - 18</b>	Non-Resilient	Vitrified Clay	500 -1000	Medium Coarse
<b>H - 22</b>	Non-Resilient	Vitrified Clay	500 - 1000	Very Course
<b>H - 38</b>	Non-Resilient	Vitrified Clay	250, 500, 1000	Very Fine, Hard
<b>CS - 0, S - 32</b>	Resilient	Non-Abrasive Rubber	200, 500, 1000	Very Mild
<b>S - 42, S - 33</b>	Resilient	Sand Paper Strips	500 - 1000	Medium
<b>CS - 5</b>	Resilient	Wool Felt	250 - 500	None
<b>S - 35</b>	Non- Resilient	Tungsten Carbide	500 -1000	Severe Cutting or Tearing Action
<b>S - 39</b>		Leather	500 -1000	Used with Grit Feeder

