



# APCC QUALITY STANDARD

## COCONUT SHELL ACTIVATED CARBON

### 1. Scope

This Standard applies for Activated Carbon produced by using coconut shell charcoal.

### 2. Definitions

#### 2.1. Activated carbon

A family of carbonaceous substances which has adsorptive properties.

#### 2.2. Adsorption

A process in which fluid molecules are concentrated on a surface by chemical or physical forces or both.

#### 2.3. Ash

Residue remaining after combustion of a material under specified conditions.

#### 2.4. Volatile matter:

Mass loss of a dry material after degasifying under specified conditions.

### 3. Raw Materials

Coconut Shell

The hard ligneous part of the mature fruit known as endocarp which lies between the husk and the brown skin (testa) of the kernel.

Coconut Shell Charcoal

The product obtained by charring coconut shells in a limited supply of air.

### 4. Definition of the product

Classification

#### Classes and Types

Activated carbon shall be of following two classes:

- a) Steam activated carbon
- b) Chemically activated carbon

The above activated carbon classes shall be of following types:

Type 1 – Powdered activated carbon

Type 2 – Granular activated carbon

Type 3 – Spherical activated carbon

Type 4 – Pelleted activated carbon

### 5. Description

5.1. The color of the material shall be in black and free from visible foreign matter. Particle size of the material shall fall into one of the four types given above.

5.2. The material shall comply with the requirements given in the Table below.

Parameters	Specification
<b>Kinds of Activated Carbon</b> <b>Powder</b> <b>Granular</b> <b>Spherical</b> <b>Pelletised</b> <b>Block AC</b>	
<b>Color</b>	Black
<b>Iodine</b>	Not more than 400-600
<b>C.T.C. adsorption</b>	20-50%
<b>Density appearance/bulk density</b>	Powder: 0.3-0.8 Granular 0.3-0.6 Spherical 0.3-0.6 Pelletised 0.3-0.6
<b>Moisture</b>	Max15% for powder, and Max 5% for other grades
<b>Abrasion resistance/ Hardness</b>	95% Maximum
<b>Total ash</b>	3% max for Granular 6% max for Powder 15% max for Spherical and for Pelletised

## 6. Storage

Enough air gaps shall be provided among individual packs during storage to improve the air ventilation since the material is potentially flammable.

Material shall be dry and packs shall be kept away from volatile materials, oxidants (e.g. hydrogen peroxide, potassium permanganate, chlorates, nitrates) and moisture.

Material shall be stored in buildings or compartments which are as fire proof as possible. Other oxidizing or flammable material shall not be stored in the same building or close perimeter.

## 7. Packaging and Marking

The material shall be packed in clean, sound and hermetically sealed sacks suitable for safe transportation and storage. All details of the product shall be marked legibly and indelibly.

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