

Norit Electronic Version

Technical Bulletin

Food

FOOD CHEMICALS CODEX (FCC) TESTING OF**Norit ACTIVATED CARBONS**

Norit is confident to declare that Norit food grade activated carbons meet the US Food Chemicals Codex (FCC, 5th edition, 2004) requirements on both the appropriate manufacturing process (1) and product quality (2) as given below:

1. The manufacturing processes to produce the Norit food grade activated carbon grades are based on the principles of GMP guidelines as they are designed to preclude the formation of undesired by-products and to prevent contamination, deterioration, mix-up and mislabeling, and the introduction of unusual or unexpected impurities.
2. The *description* in the monograph "Carbon, Activated" in the FCC is appropriate for the Norit food grade activated carbon grades. These grades meet the given *requirements* of this monograph.

Norit has developed an extensive program to routinely test its food grade activated carbon products against FCC specifications. Our testing program randomly selects individual lot samples of carbon based upon similar product groups, for example carbons which only differ in particle size but are identical in every other respect. Testing is done on a quarterly basis.

The following virgin Norit activated carbon grades are covered by the testing program and comply with the FCC as indicated on the datasheet of the Norit grade of interest.

Granular (irregularly shaped) activated carbons

Norit PK grades
 Norit GAC grades (excluding grades with "R", like GAC 830R and GAC 840R)
 Norit GAC MAG 30I
 Norit VAPURE grades
 Norit C GRAN
 Norit GCN grades
 DARCO 12x40 and other DARCO granular grades
 HYDRODARCO grades

Extruded activated carbons

Norit RB grades
 Norit ROW 0.8 Supra, Norit RO 0.8, Norit ROX 0.8 grades
 Norit CE 702

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Product / Application

Testing of A.C.

Version

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leading in purification

Activated Carbon

Powdered activated carbons

Norit SA grades (excluding Norit SAE types), Norit D 10
 Norit PN grades, Norit SX and GSX grades, Norit W grades
 Norit DX grades
 Norit ZN 2
 Norit PUREFLOW grades
 Norit Pharmacopoeia carbons (EUR, USP)
 Norit E 153 grades, Norit VETERINAIR
 Norit CA/CAP/CASP grades, Norit CN grades
 Norit CG grades, Norit GB grades
 BENTONORIT grades
 Norit PAC 200, Norit PAC 20B
 DARCO S-51 grades, DARCO A-51, DARCO G60
 HYDRODARCO grades
 DARCO KB grades
 Norit SAM grades

Following specifications as listed in the monograph for *Carbon, Activated* in the US Food Chemicals Codex, 5th edition (2004) are verified in the testing program:

Test	Requirement
Identification	passes test
Arsenic	not more than 3 mg/kg
Cyanogen compounds	passes test
Higher aromatic hydrocarbons	passes test
Iodine value	not less than 400
Lead	not more than 10 mg/kg
Water extractables	not more than 4.0 %

The detailed FCC testing methods involved are available upon request.

If it is required to certify that a particular consignment of Norit activated carbon complies with the specifications of FCC 4, Norit offers the service to provide the analytical report from a certified testing center at a charge of € 500,= per sample to be analyzed.

Note: All data and suggestions regarding the use of our products are believed to be reliable and given in good faith. However, they are given without guarantee, as the use of our products is beyond our control, and are not to be construed as recommendation or instigation to violate any existing patent. Any product quality information given was valid at the time of issuance of the publication. However, we maintain a policy of continuous development and reserve the right to amend product quality aspects without notice.

Caution: For health and safety related aspects of a Norit activated carbon, please refer to the corresponding Material Safety Datasheet (MSDS), which is available on request.

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