

**Proposed Israel tests,
characterization and compliance
tests, for coal ash.**

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There is a variety of tests available for characterizing the leaching behavior of materials.

The wide variety of tests used to assess environmental properties of materials has resulted in confusion which in turn has led to an attempt of harmonizing the approaches across different fields.

**There are too many leaching tests
addressing largely the same question**

**This is why there is an attempt to
harmonize the approaches across
different fields.**

We discuss the specific application of the characterization test (pH dependence test) and this compliance test (natural pH of the mixture of ash with water, liquid/solid ratio 10/1) to coal ashes, and why these tests are needed to accurately assess the release of contaminants into the environment.

Advantages of the characterization test (pH dependence test)

Identification of sensitivity of leaching to small pH changes.

Provides information on pH conditions imposed by external influences and acid neutralization capacity information.

Recognition of factors controlling release.

Basis for geochemical speciation modeling.

Basis for comparison with international leaching tests.

Advantages of a compliance test which uses deionized water as the leachate (L/S = 10).

It is closer to the real conditions than other tests, such as using acetic acid or a base.

It is the proposed method in the frame of European Waste Directive for determining the acceptance of a waste at each class of landfill

It should be remembered that no test in the laboratory can duplicate the natural conditions.

The proposed Israeli characterization for coal ash test

**It is a pH dependence test (pH stat) which is
based on the European standard
"Characterization of waste – Leaching
behavior tests – Influence of pH on leaching
with initial acid/base addition" CEN/TC 292,
Version 1.3, March, 2003.**

The proposed Israeli compliance test

The test is based on the European standard test, EN 12457-2: Compliance test for leaching of granular waste materials and sludge.

Part 2: One-stage batch test at a liquid to solid ratio of 10/1 for materials with a particle size below 4mm (with or without size reduction), prepared according to CEN TC/292

"Characterization of waste", January, 2003.