



Oven for standard tests on
dishwashers and detergents

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Some people are of the opinion that dishwashers rank among the most important inventions of modern times. The inventor of the dishwasher was – how could it be otherwise – a woman: American Josephine Cochrane.

High society lady becomes an inventor

Her great-grandfather was also an inventor, her father was an engineer. However, Josephine Cochrane (1839 – 1913), was not interested in technology at first. After her marriage, she lived the life of a high society lady, loved parties and had servants who carried out any kind of housework for her. However, the servants did not handle the 17th century family heirloom tableware very carefully. Of course it was out of the question for Josephine to wash the precious plates herself, and so she invented the first mechanical dishwasher, in which a water jet with hot soapy water was directed towards



Josephine Cochrane, published
on [Wikipedia](#)

the racks in the interior, on which the tableware was placed. After the death of her husband in 1883, money was tight and she had considerable debts. So it became an economic necessity to bring her invention to market. In 1897 Josephine Cochrane founded the Garis-Cochran Manufacturing Company, a factory for dishwashers, which was bought up by the Hobart company after her death. Under the brand name Kitchenaid, which is now part of the Whirlpool group, Hobart marketed the products predominantly in hotels and restaurants. Only from the mid-1960s onwards did the automatic dishwasher slowly start to become an integral part of private households.

Dishwashing is a science in itself.

Meanwhile, the market has become a highly lucrative business, and consumers expect dishwashers and detergents to fully remove even the most persistent of substances. Before new devices or detergents can be introduced on the market, they have to pass numerous tests. Inside the oven, renowned residues like tea, starch flour, milk, eggs, spinach or mince are virtually burnt onto the dishes in order to be able to assess the interaction between spray arms, water jet pressure/volume and chemical cleaning detergents afterwards. By the way: The oven is also used during detergent tests for glass ceramic surfaces. Here, the dirt is burnt onto a glass ceramic hotplate at high temperatures.

Memmert fires dirty dishes up!

For many years, the Memmert air-circulation heating oven UFP800DW has been setting standards when it comes to testing the performance of dishwashers and household detergents. DIN EN 50242/DIN EN 60436 defines test procedures for electric dishwasher performance, citing the Memmert UFP800DW as an example of an air-circulation heating oven which is compliant with the specifications of the standard. To prevent temperature overshoots in any and all cases, Memmert R&D department have adapted the temperature control and heating power to the test parameters stipulated in EN 50242/EN 60436. Support brackets for steel testing grids, spacer strips, as well as racks for cups and glasses have been pre-mounted.



Memmert air-circulation heating oven UFP800DW for tests in accordance with DIN EN 50242/DIN EN 60436

Sources:

http://en.wikipedia.org/wiki/Josephine_Cochrane

<http://forgottennewsmakers.com/2010/04/20/josephine-cochrane-1839-1913-invented-the-dishwash>

www.uh.edu/engines/epi1476.htm

Overview of the main topics

- Dishwasher
- Josephine Cochrane
- Heating oven
- EN 50242
- EN 60436
- Performance testing for dishwashers and household detergents
- Fouling

Laboratory equipment for tempering processes and drying

[Universal oven U](#)

[Cleanroom drying oven UFplus](#)

[Pass-through oven UFP TS](#)

[Vacuum oven VO](#)

[Testing control appliances in the climate chamber](#)

Stuhl Regelsysteme GmbH uses a Memmert climate chamber ICH 256 to perform function tests on its electronic control appliances.

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Autor:

www.atmosafe.net > [Applications](#) > [Drying and Heating](#) > [Fouling dishes](#)

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