

## ITDI introduces

# Agitating batch retort to increase shelf-life, food quality

Bicutan, Taguig City—The Department of Science and Technology—Industrial Technology Development Institute (DOST-ITDI) is introducing ultramodern equipment, the agitating batch retort. This multifunctional retort thermally processes food packaged in cans, glass jars, and pouches to preserve food products for a minimum shelf life of one year.

Being multifunctional, the equipment can operate as a steam retort, water spray retort, and immersion retort. It has two modes of agitation, end-over-end and rocking or swaying, with varying agitation speeds. It can also function as a still retort when agitation is unnecessary, thus handling a wide range of food products.

During operation, the retort accelerates heat transfer inside the container, allowing the packaged food to move inside with the rotating trays. This reduces process time, improves food product quality, and minimizes heat damage to the food products.

Likewise, the availability of this retort addresses national problems regarding food waste and agricultural losses because it can reduce food waste by preventing spoilage, eliminating microbial contaminants, and extending food's shelf life.

Some ITDI-developed technologies use the agitating batch retort to thermally process bottled food products like white beans in syrup, chickpeas in syrup, and canned mango cubes in syrup.

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Also, at ITDI, several auxiliary equipment are available at the Food Processing Division's thermal processing facility, which can be used for research and development work with the retort, such as a steam jacketed kettle, liquid filling machine, exhaust box, and can seamer. Also, a wide thermal validation and data collection system for lethality monitoring, and thermocouples to conduct HPT (Heat Penetration Test) and HDT (Heat Distribution Test) are tailored to agitated retorts.



The retort was introduced to industry stakeholders during an open house activity for the agitated retort facility held on October 29, 2024.

Presently, ITDI's agitating batch retort facility is ready for use through different modes of engagement, such as project collaboration, facility use, consultancy, and contract research. (DDGotis\ ITDI S&T Media Service)

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