

Okra flakes from rejects can be turned into nutritious snacks and other consumer products, DOST-ITDI says

Bicutan, Taguig City – The Industrial Technology Development Institute (DOST-ITDI), as one of the Research and Development Institutes of DOST, continues to innovate to help uplift local industries, improve their productivity, and contribute to the socio-economic growth of the country.

Taking advantage of the abundance of agricultural crops, particularly Okra or Lady Finger, and the huge volume of off-specification okra pods that are rejected by the export market, DOST-ITDI explored the potential of this raw material to produce okra flakes or sheets by dehydration techniques using drying equipment such as the hot-plate, oven, and cabinet drier.

The flakes or sheets can then be further processed into nutritious snacks or as an intermediate material for other consumer products like chocolate-coated okra chips, bakery products (bread, cookies, biscuits), and as ingredients for vegetable juice mixes, toppings, and wrappers for several food products.



Okra Sheet by Hot Plate Method



Cabinet-Dried Okra Sheet in cheesecloth



Drum-Dried Okra Sheet



Okra production grew at an annual average rate of 0.9% per Crop Statistics of the Philippines, 2019. In Tarlac, where okra production is regarded as a sunshine industry, about three to five tons of okra daily is wasted due to off-specifications. This wastage problem is why farmers and exporters are looking for a way to use and convert these rejects into something valuable. Thus, DOST-ITDI explored the potential of processing okra flakes/sheets for use as an intermediate material to other consumer products or as nutritious snacks, and the results-were quite promising.

The Okra flakes are produced by sorting the Okra pods, weighing, washing, sanitizing, blanching, pureeing, and processing using ITDI dehydration equipment and techniques such as hot-plate, oven, and cabinet drying, which are cheaper alternative methods to the expensive drum-drying method. Likewise, the products' physicochemical analyses, microbiological, and sensory evaluations were also conducted and completed.

The result of the trial runs using the different drying methods showed that cabinet drying could be used as an alternative method in the production of okra flakes/sheets. It was also proven cheaper than other drying methods or techniques, and the produced flakes or sheets can be marketed as high-value products. ([\DDGotis](#), ITDI S&T Media Service)

Inspired by Technology, Driven by Innovation