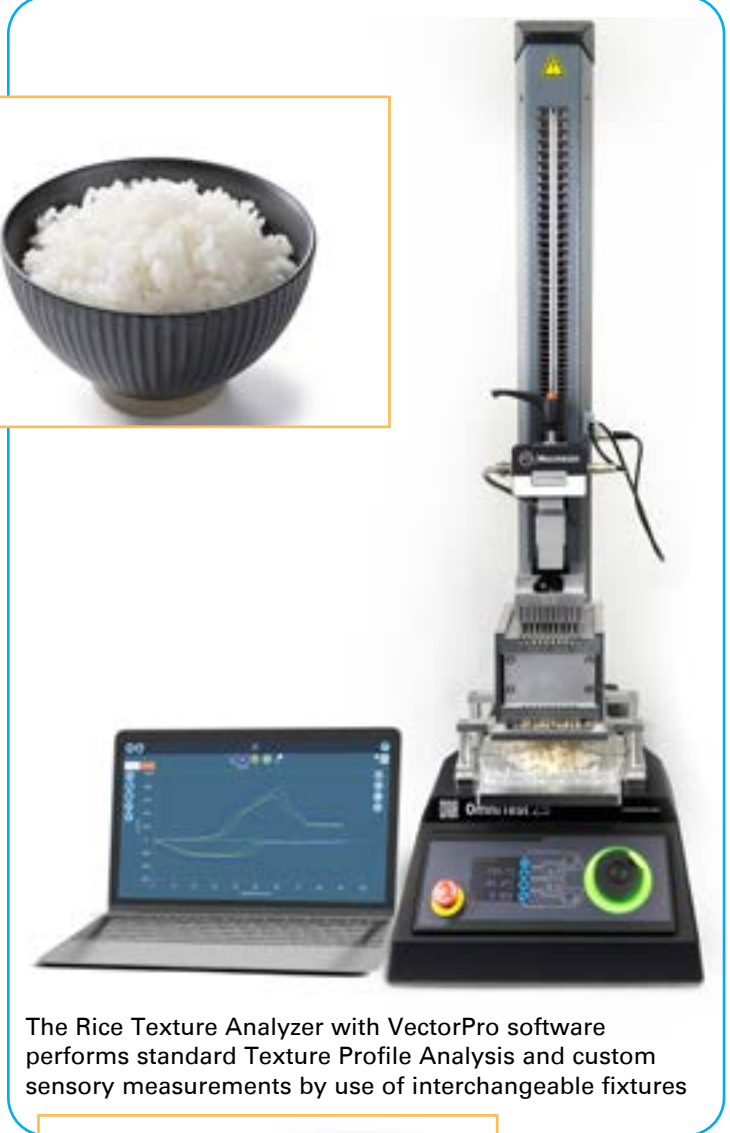


Rice Texture Analyzer

The texture of rice is vital to how the consumer perceives the quality of the product. The Mecmesin Rice Texture Analyzer is a bench-top, software-controlled instrument to measure the sensory mouthfeel of cooked rice and other foods.

This system gives the rice producer a quantifiable method to benchmark and compare the texture of different rice varieties, optimize the cook profile (to indicate consumer preparation instructions) and check the consistency of supplied raw grains. It can evaluate the impact of variations in harvesting, which affects the protein and carbohydrate levels in rice. These two characteristics have a great deal of influence on the final texture when it is prepared.

Fitted with a Kramer compression-shear fixture, the system replicates the natural bite and chewing action and the results correlate to the established Texture Profile Analysis (TPA) parameters which define mouthfeel.



The Rice Texture Analyzer with VectorPro software performs standard Texture Profile Analysis and custom sensory measurements by use of interchangeable fixtures



Thin-blade CS-2 Kramer Shear Cell for smaller rice grains



Bulk analysis of all varieties of rice may be tested, as well as noodles and other similar foods

Specifications

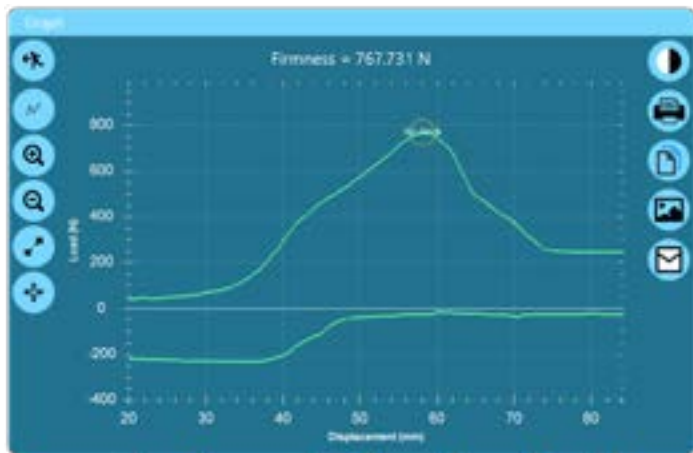
| Part No. | Description |
|-------------------|---|
| 820-002.5 | 2.5 kN Rice Texture Analyzer with VectorPro Software |
| 880-024 | Enhanced Load Sensor ELS-S 2500N (M12 thread) |
| 432-031/432-031-A | FTC Thin Blade Compression Cell Model CS-2 / Stainless steel & black Delrin for high acid samples |
| 432-240/432-240-A | FTC Standard Shear Compression Cell Model CS-1 / Stainless steel & black Delrin for high acid samples |

VectorPro software Texture Profile Analysis calculations

VectorPro software controls the Texture Analyzer to apply the forces on the test sample, acquires the data and automatically calculates the results which correlate to the correct sensory qualities. The food scientist can examine the graph of force vs displacement and assign peak, average, areas and other values to texture property calculations.

Firmness

The peak compression force measured during the complete bite cycle represents the **firmness**. This indicates if the rice has been cooked enough.



Stickiness and adhesiveness

As the shear blades return to the start of the cycle, the peak tension force indicates the **stickiness** in the cooked rice, correlating to the starch released during cooking. This texture may be desirable in some dishes. The TPA parameter of **adhesiveness** is the work required to fully release the chewed material from the mouth and is calculated from the area under the curve.



Testing rice hardness to ISO11747

ISO11747 is the determination of rice kernel resistance to extrusion through a perforated plate using compression. Six samples are prepared and placed in a fixture of specific dimensions and compressed at 10 cm/min. The **hardness** is calculated as the mean force at the curve plateau after compression when the sample is in the extrusion phase.



A suitable ISO11747 Rice Extrusion Cell

Mecmesin reserves the right to alter equipment specifications without prior notice. E&OE.

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