Rice Analyser NPMZ-A appearance quality detector

NPMZ-A rice appearance quality detector is mainly used for detecting and analyzing the appearance quality of rice. It can automatically analyze and evaluate various types of rice (including japonica, indica, black, yellow, and embryonic rice), and can detect the total number of rice grains, thousand grain weight, grain type, national standard whole head rice, pure head rice, whole head rice rate, broken rice grains, chalky rice grains, chalky grain rate, chalkiness area, chalkiness, transparency, imperfect grain parameters such as grain number and yellow rice grain rate.

It is often used to analyze the appearance of seed rice by scientific research and testing units, grain circulation enterprises, processing enterprises, etc., such as the rice and product quality supervision and testing center, rice planting laboratory, gene research center, genetics and developmental biology research institute.

Detection indicators

The main detection indicators of the rice appearance quality detector include: total number of rice, thousand grain weight, grain type (length, width, aspect ratio, and area of each grain), national standard head rice number, head rice rate, broken rice rate, chalkiness rate, chalkiness degree, transparency, imperfect grain number, yellow rice rate, different varieties of grain, imperfect grain, shady glutinous rice rate, rice crack rate, brown rice germ rate, and other indicators.

Functional characteristics

- National testing standards: Corresponding to national standards such as GB/T1350 rice, GB/T17891 high-quality rice, and GB1354 rice, and the new standard of the Ministry of Agriculture (Rice) NY/T2334-2013.
- Single grain analysis: Automatically measure parameters such as grain type and chalkiness of each grain, and automatically analyze and output results in large batches.
- Intelligent segmentation of sticky rice kernels: The software can automatically recognize and segment sticky rice kernels.
- Role conversion of rice grains: Click on the corresponding sample grain to convert the samples into unbroken rice, broken rice, cracked rice, yellow rice, embryonic rice, glutinous rice, and black rice.
- Marking rice for easy screening: Text can be added to the rice image as a marker for easy screening of interested rice.
- Personalized display parameters: Different color boxes can be set for the analyzed parameters, making it easy to visually display and distinguish various rice quality and chalky areas such as broken rice, whole rice, and abnormal rice.
- Area selection analysis to avoid interference from other rice: The target area can be manually framed, and grain type, head milled rice rate, chalkiness, and chalkiness grain rate analysis can be conducted on the rice quality within the area.
- Manual deletion of impurities: Abnormal rice can be manually deleted, and data can be automatically updated for more accurate inspection.

- Data saving and output: Can save analysis data, arrangement and distribution maps, comparison maps, and export Excel tables.
- Support for cloud platforms: Analytical data can be saved to the cloud and viewed anytime, anywhere.
- Software security encryption: The software uses a dongle-dynamic QR code encryption method to make data more secure.
- Printing function: Equipped with a thermal printer as standard, it can print rice data for easy viewing.

Technical parameter

Scanner	Optical resolution 4800 × 9600dpi, scanning width 30 cm × 20 cm, minimum pixel size 0.0053mm × 0.0026 mm, with a single scan of rice weighing up to 30g
Scanner overall size	576 mm (L) × 297 mm（W）× 118 mm（H）
Scanner weight	6.4 kg
Scanner power	38 w (15V, 2.5A)
Operating temperature	10 ℃~35 ℃
Operating humidity	20%~85% RH
Single test sample size	<3000, recommended sample size is about 12g
Measurement error of length and width	≤ ± 0.05mm
Head milled rice rate error	≤ ± 1.0%
Repeatability error of yellow rice	≤ ± 0.5%

Rice Apparance quality analyzer

Image scanning and collection, software processing

