

Measuring White Rice Quality (b)

What are the properties of white rice that must be measured?

1. Moisture,
2. Grain dimensions
3. 1000 grain weight
4. Milling degree
5. Milling recovery
6. Dockage
7. Head rice and broken grains
8. Chalkiness
9. Whiteness
10. Grain shape

Measurements

8. Chalkiness

A visual rating of the chalky proportion of the grain is used to measure chalkiness based on the standard Evaluation System SES scale presented below: Select, segregate and weigh the chalky grains (SES Scale 9). Determine the % chalky grain using the equation

Scale	% area of chalkiness
1	less than 10
5	10-20
9	more than 20

$$\% \text{ Chalky grain} = \frac{\text{Wt of chalky grains}}{\text{Wt of milled rice}} \times 100$$

9. Whiteness

- Measure the grain whiteness using the Whiteness Meter.
- Separate and weigh yellow-fermented grains. Calculate the percentage of yellow/fermented grains using the formula:

$$\% \text{ Yellow grains} = \frac{\text{Wt yellow grains}}{\text{Wt total milled rice}} \times 100$$

10. Grain Shape

- Follow the procedure of determining grain shape of paddy. Based on the length to width ratio, the shape of the milled rice will be determined. The ISO Classification is as follows:

$$L/W \text{ ratio} = \frac{\text{Avg. length of rice}}{\text{Avg. width of rice}} \times 100$$

Scale	Shape	L/W ratio
1	Slender	Over 3.0
3	Medium	2.1 – 3.0
5	Bold	1.1 – 2.0
9	Round	1.0 or less

For more information contact

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