QUALITY CHARACTERIZATION OF CALIFORNIA PUBLIC RICE VARIETIES

M-402

*M-402 is a late maturing premium quality medium grain released in 1999. It has a smaller kernel than M-401 and grains are more translucent and give higher milling yields. Its pedigree is: Kokuhorose/4/M7*2/M9//M7/3/M-401/Kokuhorose.*

U.S. MARKET TYPE:
MEDIUM GRAIN

QUALITY TYPE:
PREMIUM MEDIUM GRAIN

	2000	2001	2002
Grain Dimensions (Paddy)			
Average Length (mm)	8.42	8.27	8.27
Average Width (mm)	3.01	2.97	3.04
L/W Ratio	2.8	2.8	2.7
Grain Dimensions (Brown)			
Average Length (mm)	6.19	6.17	6.09
Average Width (mm)	2.69	2.66	2.75
L/W Ratio	2.3	2.3	2.2
1000 Grain Weight (g)	22.8	22.8	21.8
Grain Dimensions (Milled)			
Average Length (mm)	5.88	5.81	5.73
Average Width (mm)	2.63	2.58	2.63
L/W Ratio	2.2	2.2	2.2
Apparent Amylose (%)	18.3	17.7	16.5
Protein (%)			
Brown	6.8	6.9	5.8
Milled	6.0	5.8	5.6
Alkali Spreading Value (1.5%KOH)	6.9	6.0	6.0
Alkali Spreading Value (1.7%KOH)	7.0	7.0	6.9
Cooking Time (min)	15.7	16.7	18.4
Differential Scanning Calorimetry			
Gelatinization Temperature (°C)	65.0	66.7	67.4

	2000	2001	2002
Rapid Visco Analyzer			
AACC Method:			
Peak	234	269	233
Hot Paste	120	131	117
Cool Paste	214	226	203
Setback	-20	-43	-30
Consistency	94	95	86
Breakdown	114	138	116
Pasting Temperature (°C)	69.0	70.2	69.9
Japanese Method:			
Peak	271	304	240
Hot Paste	114	116	97
Cool Paste	214	217	184
Setback	-58	-86	-57
Consistency	99	102	87
Breakdown	157	188	143
Pasting Temperature (°C)	68.6	69.3	71.6
Controlled Stress Rheometer (Pa.s)			
Peak	0.37	0.59	0.40
Hot Paste	0.22	0.31	0.24
Cool Paste	0.47	0.66	0.51
Setback	0.10	0.08	0.11
Consistency	0.25	0.36	0.27
Breakdown	0.15	0.29	0.16
Pasting Temperature (°C)	64.9	66.3	67.0

PADDY

BROWN

MILLED

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