

**GRAINRUS**Food and beer -
the supply chain starts here

119048, Moscow, Uchebnyy pereulok, 4, bld. 1, office VI

www.grainrus.com info@grainrus.com +7 (495) 789-89-41

RAW MATERIALS FOR BREWING

LOGISTICS

GRAIN TRADING

SEED & PLANT CULTIVATION

**KURSK MALT**

Grainrus-Kursk malt, LLC

CERTIFICATE OF QUALITY / MALT ANALYSIS**B.05.06.04 – Regulatory**B – initial data
05 – requirements
06 – quality control laboratory
04 – document progress number
Sp – SpecificationApproved by: General manager,
G.A.Avidonova**"Pilsner Brewers Barley Malt Specification»****Confidential**

Organoleptic properties:

Appearance: homogeneous grain mass, not containing the mould grains and grain pests
Color: from light yellow to grey-yellow. Reddish tint is allowed. Greenish and dark tint do not allowed
Odor: Malty, without foreign smell
Taste: Sweet. Sweet. Not allowed bitter and burnt

Barley varieties:

Despina, Explorer, Grace, Hobbs, Planet, Orfelia

Physicochemical properties:

| Item No. | Property name | Unit | | Target value |
|----------|---|------------------------------|-----|--------------|
| | | | | |
| 1 | Moisture | % | max | 5.0 |
| 2 | Extract in fine grind, dry basis | % | min | 80.8±0.4 |
| 3 | Extract difference (fine/coarse), dry basis | % | - | 1.0–1.8 |
| 4 | pH of Wort | Units | - | 5.7–6.1 |
| 5 | Wort Colour | EBC | - | 3.5-4.3 |
| 6 | Boiled Colour | EBC | max | 6.5 |
| 7 | Viscosity | mPa.s | max | 1.55 |
| 8 | Hartong number 45° | % | - | 35-41 |
| 9 | Protein in malt, dry basis | % | - | 9.5-11.5 |
| 10 | Soluble protein | % | - | 3.8-4.8 |
| 11 | Kohlbach Index | % | - | 39-41 |
| 12 | Wort FAN (Free Amino N) | mg/l | min | 135 |
| 13 | Friability | % | min | 85 |
| 14 | Glassy grains (steely kernels) | % | max | 2.0 |
| 15 | Final attenuation (Fin.Deg.Af Attenuation) | % | min | 79.0 |
| 16 | Beta-glucan in Wort | mg/l | max | 220 |
| 17 | Diastatic power (WK), dry | °WK | min | 240 |
| 18 | Filtration time | min. | max | 40 |
| 19 | Acidity | cm3 at 0.1N of NaOH solution | - | 0.9–1.1 |
| 20 | Saccharification time | min. | max | 15 |
| 21 | Foreign matter | % | max | 0.3 |
| 22 | Pest infestation | - | - | not allowed |

Grainrus – Kursk Malt, LLC

B.05.06.04 – Sp

Pilsner Brewers Barley Malt Specification

Revision 8