

Blackjack

- Gravity **20.9 BLG**
- ABV **9.3 %**
- IBU **45**
- SRM **29.4**
- Style **Baltic Porter**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **30 %/h**
- Boil size **23.7 liter(s)**

Mash information

- Mash efficiency **62 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.8 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	4.5 kg (56.3%)	80 %	16
Grain	Pilzneński	2.2 kg (27.5%)	81 %	4
Grain	Słód Caramunich Typ II Weyermann	0.2 kg (2.5%)	73 %	120
Grain	Special B Malt	0.15 kg (1.9%)	65.2 %	315
Grain	Carafa II	0.35 kg (4.4%)	70 %	812
Grain	Płatki owsiane	0.3 kg (3.8%)	85 %	3
Sugar	Cukier Muscovado Dark	0.3 kg (3.8%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Lublin (Lubelski)	40 g	20 min	4 %
Boil	Marynka	40 g	15 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	200 ml	Safale