

## ris

- Gravity **22.7 BLG**
- ABV **10.3 %**
- IBU **52**
- SRM **59**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **5 %/h**
- Boil size **13 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (58.8%)	80 %	5
Grain	Viking Malt Wędzony Czereśnią	0.9 kg (17.6%)	82 %	10
Grain	Strzegom Czekoladowy ciemny	0.1 kg (2%)	68 %	1200
Grain	Carafa II	0.4 kg (7.8%)	70 %	812
Grain	Jęczmień palony	0.1 kg (2%)	55 %	985
Grain	kawowy	0.5 kg (9.8%)	77 %	500
Dry Extract	WES ekstrakt słodowy jasny	0.1 kg (2%)	1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	6.5 %
Boil	Marynka	20 g	30 min	6.5 %
Boil	Northern Brewer	20 g	15 min	7.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us 04	Ale	Dry	20 g	---