

Stout ZP

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **19**
- SRM **31.9**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19 liter(s)**
- Total mash volume **25.4 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (78.7%)	80 %	5
Grain	Strzegom Karmel 150	1 kg (15.7%)	75 %	150
Grain	Strzegom Barwiący	0.35 kg (5.5%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	15 g	60 min	11.2 %
Whirlpool	Lublin (Lubelski)	30 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale