Szwarc

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **25**
- SRM **25.5**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **40.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **48.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.7 liter(s) / kg**
- Mash size **40 liter(s)**
- Total mash volume **48.5 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg *(58.8%)*	80 %	4
Grain	Monachijski	2 kg *(23.5%)*	80 %	16
Grain	Strzegom Czekoladowy jasny	0.5 kg *(5.9%)*	68 %	400
Grain	Strzegom Karmel 300	0.3 kg *(3.5%)*	70 %	299
Grain	Karmelowy Jasny 30EBC	0.3 kg *(3.5%)*	75 %	30
Grain	Strzegom Barwiący	0.4 kg *(4.7%)*	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	24.7 g	60 min	15 %
Boil	Hallertau Tradition	47.5 g	5 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	95 ml	Fermentum Mobile