

Szwarc

- Gravity **12.9 BLG**
- ABV ---
- IBU **24**
- SRM **26.7**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.7 liter(s) / kg**
- Mash size **23.3 liter(s)**
- Total mash volume **28.2 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.7 kg (54.5%)	80 %	4
Grain	Monachijski	1.5 kg (30.3%)	80 %	16
Grain	Strzegom Czekoladowy jasny	0.2 kg (4%)	68 %	400
Grain	Strzegom Karmel 300	0.15 kg (3%)	70 %	299
Grain	Karmelowy Jasny 30EBC	0.15 kg (3%)	75 %	30
Grain	Strzegom Barwiący	0.25 kg (5.1%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	13 g	60 min	15 %
Boil	Hallertau Tradition	25 g	5 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	50 ml	Fermentum Mobile