

Quadrupel

- Gravity **24.4 BLG**
- ABV **11.3 %**
- IBU **17**
- SRM **15.8**
- Style **Belgian Dark Strong Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.7 liter(s)**
- Total mash volume **35.6 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **26.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	4 kg (41.5%)	79 %	10
Grain	Strzegom Pilzneński	4 kg (41.5%)	80 %	4
Grain	Strzegom Bursztynowy	0.8 kg (8.3%)	70 %	49
Grain	Strzegom Czekoladowy ciemny	0.1 kg (1%)	68 %	1200
Sugar	Cukier kandyzowany	0.75 kg (7.8%)	100 %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	50 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	10 min	4 %
Aroma (end of boil)	Saaz (Czech Republic)	20 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM21 Odkrycie sezonu	Ale	Slant	300 ml	Fermentum Mobile