

Ale karmelowy

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **62**
- SRM **21.8**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

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 **18.8 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **67 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (80%)	80 %	5
Grain	Strzegom Karmel 300	1 kg (16%)	70 %	299
Grain	Karmelowy Pszeniczny Strzegom	0.25 kg (4%)	79 %	130

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	40 g	90 min	13.5 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	5 min	4 %
Aroma (end of boil)	Hallertau	30 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	12 g	Safale