

Ale 14

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **37**
- SRM **8.2**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **4 %**
- Size with trub loss **26 liter(s)**
- Boil time **70 min**
- Evaporation rate **8 %/h**
- Boil size **30.1 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **76.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **30.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4.6 kg (80.1%)	82 %	4
Grain	Carabelge	0.27 kg (4.7%)	80 %	30
Grain	Karmelowy Czerwony	0.35 kg (6.1%)	75 %	59
Grain	Viking melanoidynowy	0.32 kg (5.6%)	75 %	60
Grain	Strzegom Karmel 150	0.2 kg (3.5%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Styrian Golding Celeia	20 g	15 min	3.4 %
Aroma (end of boil)	Styrian Golding Celeia	20 g	1 min	3.4 %
Aroma (end of boil)	Styrian Golding Celeia	20 g	5 min	3.4 %
Boil	Styrian Golding Celeia	20 g	15 min	3.4 %
Boil	Extra Styrian Dana	25 g	30 min	9.9 %
Boil	Extra Styrian Dana	15 g	60 min	9.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale