

Chmielak Jeleniogórski

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **25**
- SRM **5.2**

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 **3.5 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.9 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **12 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	1 kg (18.9%)	80 %	5
Grain	Viking Vienna Malt	1 kg (18.9%)	79 %	7
Grain	Strzegom Karmel 30	0.3 kg (5.7%)	75 %	30
Grain	Viking Golden Ale	1 kg (18.9%)	80 %	9
Grain	Viking Pilsner malt	2 kg (37.7%)	82 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12 g	60 min	13.5 %
Boil	Magnum	5 g	15 min	13.5 %
Boil	Hallertau	15 g	15 min	4.5 %
Aroma (end of boil)	Hallertau	5 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	10 g	Mangrove Jack's