

Cow-Chow

- Gravity **23.1 BLG**
- ABV **10.5 %**
- IBU **20**
- SRM **42.7**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Jęczmień palony	0.25 kg (3.7%)	55 %	985
Grain	Strzegom Karmel 600	0.25 kg (3.7%)	68 %	601
Grain	Viking Pale Ale malt	5 kg (74.1%)	80 %	5
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.7%)	68 %	1200
Adjunct	Płatki owsiane	1 kg (14.8%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	50 g	20 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	400 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
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Other	laktoza	500 g	Boil	10 min
Spice	maliny	500 g	Secondary	60 day(s)