

Czarnobrody

- Gravity **17.5 BLG**
- ABV **7.5 %**
- IBU **41**
- SRM **26**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (44.1%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (14.7%)	79 %	10
Grain	Strzegom Monachijski typ I	1 kg (14.7%)	79 %	16
Grain	Viking Malt Wędzony Czereśnią	1 kg (14.7%)	82 %	10
Grain	Simpsons - Crystal Medium	0.3 kg (4.4%)	74 %	108
Grain	Fawcett - Pale Chocolate	0.2 kg (2.9%)	71 %	600
Grain	Carafa II	0.2 kg (2.9%)	70 %	812
Grain	Jęczmień palony	0.1 kg (1.5%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Saaz (Czech Republic)	30 g	30 min	4.5 %

Boil	Saaz (Czech Republic)	30 g	10 min	4.5 %
------	-----------------------	------	--------	-------

Yeasts

Name	Type	Form	Amount	Laboratory
FM30 Bohemska rapsodia	Lager	Liquid	200 ml	Fermentum Mobile