

Ciemniak

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **21**
- SRM **14.8**
- Style **Weizen/Weissbier**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **0 %**
- Size with trub loss **25 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **31.6 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.8 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.1 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Dark Wheat Malt	4 kg (51.9%)	85 %	14
Grain	Weyermann - Vienna Malt	2 kg (26%)	81 %	8
Grain	Weyermann - Carawheat	0.5 kg (6.5%)	77 %	97
Grain	Strzegom Monachijski typ I	1.1 kg (14.3%)	79 %	16
Grain	Weyermann - Pszeniczny Czekoladowy	0.1 kg (1.3%)	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	50 g	40 min	5.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

FM41 Gwoździe i Banany	Ale	Slant	100 ml	---
---------------------------	-----	-------	--------	-----