

## #143 Na razie mnie nie męcz

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **15**
- SRM **4.5**
- Style **Munich Helles**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **22.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.22 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **17.7 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **10 min**
- Temp **69 C**, Time **50 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **10 min** at **64C**
- Keep mash **50 min** at **69C**
- Keep mash **1 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Malt pilzneński	2.95 kg (70.2%)	80 %	4
Grain	Viking Malt monachijski	0.7 kg (16.7%)	80 %	16
Grain	Viking Malt wiedeński	0.4 kg (9.5%)	79 %	10
Grain	Carapils	0.15 kg (3.6%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Mittelfruh	20 g	60 min	6.1 %

### Yeasts

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