

## #161 Czy tu się głowy ścina?

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **16**
- SRM **3.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21.3 liter(s)**
- Trub loss **6 %**
- Size with trub loss **22.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16.3 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **76.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (93%)	80 %	5
Grain	Carabody	0.3 kg (7%)	72 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amora Preta PL 2021	20 g	40 min	7.3 %
Aroma (end of boil)	Amora Preta PL 2021	50 g	1 min	7.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	50 ml	Fermentum Mobile