

## Born in Kłanino

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **21**
- SRM **3.8**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.8 liter(s)**

### Steps

- Temp **66 C**, Time **45 min**
- Temp **70 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (95.2%)	81 %	4
Grain	Carahell	0.2 kg (4.8%)	77 %	26

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	hallertauer taurus	10 g	60 min	14 %
Aroma (end of boil)	Hersbrucker	50 g	5 min	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - Bavarian Lager	Lager	Liquid	200 ml	Wyeast Labs