

## saison

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **23**
- SRM **23**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (66.7%)	80 %	4
Grain	Caraaroma	0.3 kg (4%)	78 %	400
Grain	Jęczmień palony	0.2 kg (2.7%)	55 %	900
Grain	Płatki owsiane	0.4 kg (5.3%)	60 %	3
Grain	Carafa	0.1 kg (1.3%)	70 %	800
Grain	Monachijski	1.5 kg (20%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	16 g	60 min	15.8 %
Dry Hop	Citra	100 g	3 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Drożdże piwne Gozdawa Trappist Ale Yeast	Ale	Dry	20 g	---