

## siedem na raz

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **30**
- SRM **11.2**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (63.7%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (21.2%)	79 %	10
Grain	Weyermann Caramunich 3	0.5 kg (10.6%)	76 %	150
Grain	Strzegom Karmel 150	0.213 kg (4.5%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	5.1 %
Aroma (end of boil)	East Kent Goldings	40 g	15 min	5.1 %
Aroma (end of boil)	East Kent Goldings	30 g	1 min	5.1 %

### Yeasts

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