

## wypadowe z resztek

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **25**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **44 liter(s)**
- Trub loss **5 %**
- Size with trub loss **46.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **55.7 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **42 liter(s)**
- Total mash volume **56 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **42 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **27.7 liter(s)** of **76C** water or to achieve **55.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Wheat Malt	5 kg (35.7%)	83 %	5
Grain	Viking Pale Ale malt	5 kg (35.7%)	80 %	5
Grain	Viking Wheat Malt	4 kg (28.6%)	83 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	60 g	60 min	4 %
Aroma (end of boil)	Cascade	100 g	10 min	6 %
Aroma (end of boil)	Willamette	30 g	10 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Fermentis