

## america

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- Gravity **12.4 BLG**
- ABV ---
- IBU **31**
- SRM **7.5**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **3 %**
- Size with trub loss **27.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **23.5 liter(s)**

### Steps

- Temp **43 C**, Time **20 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **17.6 liter(s)** of strike water to **46.8C**
- Add grains
- Keep mash **20 min** at **43C**
- Keep mash **15 min** at **53C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **21.8 liter(s)** of **76C** water or to achieve **33.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	2.5 kg (42.6%)	85 %	4
Grain	Viking Pale Ale malt	2.5 kg (42.6%)	80 %	5
Grain	Pszenica niesłodowana	0.25 kg (4.3%)	75 %	3
Grain	Strzegom pszenica prażona	0.25 kg (4.3%)	70 %	6
Grain	zakwaszający	0.125 kg (2.1%)	70 %	7
Grain	Karmelowy Pszeniczny Strzegom	0.25 kg (4.3%)	79 %	130

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Citra	20 g	60 min	12 %
Aroma (end of boil)	Amarillo	10 g	60 min	9.5 %
Dry Hop	Lemon drop	50 g	7 day(s)	4.6 %
Dry Hop	Citra	20 g	7 day(s)	12 %

Dry Hop	Amarillo	20 g	7 day(s)	9.5 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
WLP320 - American Hefeweizen Ale Yeast	Wheat	Liquid	40 ml	White Labs

### Extras

Type	Name	Amount	Use for	Time
Herb	trawa cytrynowa	20 g	Boil	10 min
Spice	skórka bergamotki	20 g	Boil	10 min