

## APA 45

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **72**
- SRM **13.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **10 %**
- Size with trub loss **29.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **32 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.2 liter(s) / kg**
- Mash size **29.4 liter(s)**
- Total mash volume **36.4 liter(s)**

### Steps

- Temp **69 C**, Time **60 min**

### Mash step by step

- Heat up **29.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **69C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **32 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6.5 kg (92.9%)	80 %	5
Grain	Strzegom Czekoladowy jasny	0.5 kg (7.1%)	68 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	10.6 %
Boil	Simcoe	35 g	60 min	11.3 %
Boil	Citra	10 g	5 min	13.4 %
Boil	Amarillo	10 g	5 min	9.4 %
Boil	Centennial	10 g	5 min	10.5 %
Aroma (end of boil)	Citra	15 g	10 min	13.4 %
Aroma (end of boil)	Amarillo	15 g	10 min	9.4 %
Aroma (end of boil)	Centennial	15 g	10 min	10.5 %
Dry Hop	Citra	25 g	3 day(s)	13.4 %
Dry Hop	Amarillo	25 g	3 day(s)	9.4 %
Dry Hop	Centennial	25 g	3 day(s)	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Lallemand - LalBrew Voss Kveik	Ale	Slant	50 ml	Lallemand
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	sól epsom	3 g	Mash	---
Water Agent	gips piwowarski	4 g	Mash	---
Fining	whirlfloc	0.5 g	Boil	15 min