

# NE PA

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **22**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.1 liter(s)**

## Steps

- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.9 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **21.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (47.1%)	81 %	4
Grain	Viking Pale Ale malt	2 kg (47.1%)	80 %	5
Grain	Abbey Malt Weyermann	0.25 kg (5.9%)	75 %	45

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	20 g	20 min	6 %
Aroma (end of boil)	Cascade	20 g	0 min	6 %
Whirlpool	Cascade	60 g	15 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wlp066 London Fog	Ale	Liquid	1000 ml	White Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Kwas fosforowt	2 g	Mash	---
Do zakwaszenia wody do wysładzania				

Water Agent	kwas fosforowy	1 g	Mash	---
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