

WPA

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **43**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **6.8 liter(s)**
- Total mash volume **9.9 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **6.8 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **17.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2 kg (64.5%)	85 %	7
Grain	Pszeniczny	0.5 kg (16.1%)	85 %	4
Grain	Monachijski	0.5 kg (16.1%)	80 %	16
Grain	Abbey Malt Weyermann	0.1 kg (3.2%)	75 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	55 min	12.8 %
Aroma (end of boil)	Cascade	10 g	15 min	6.7 %
Aroma (end of boil)	Simcoe	10 g	15 min	13.3 %
Aroma (end of boil)	Palisade	10 g	15 min	8.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	Fermentis

Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Other	Bretty	500 g	Secondary	120 day(s)