

# PNEIPA EXPF-3/20 SH

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **24**
- SRM **4.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **66 C**, Time **15 min**
- Temp **73 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.8 kg (95%)	81 %	4
Grain	Weyermann - Carapils	0.2 kg (5%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	EXPF-3/20	60 g	10 min	7 %
Whirlpool	EXPF-3/20	40 g	0 min	7 %
Dry Hop	EXPF-3/20	100 g	3 day(s)	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wlp067	Ale	Slant	100 ml	white labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	4 g	Mash	60 min