

## American IPA #47

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **63**
- SRM **6.2**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **75 min**
- Evaporation rate **12 %/h**
- Boil size **28.5 liter(s)**

### Mash information

- Mash efficiency **81.3 %**
- Liquor-to-grist ratio **3.35 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - pilzniejszy	2 kg (33.4%)	80.5 %	4
Grain	Viking - pilzniejszy	1.4 kg (23.4%)	80 %	4
Grain	Bestmalz - pale ale	0.5 kg (8.4%)	80.5 %	6
Grain	Viking - pale ale	0.45 kg (7.5%)	79 %	6
Grain	Weyermann - pale ale	0.4 kg (6.7%)	79 %	6
Grain	Bestmalz - pszeniczny	0.6 kg (10%)	82 %	4.5
Grain	Bestmalz - monachijski I	0.48 kg (8%)	80 %	16
Grain	Chateau - Crystal	0.15 kg (2.5%)	78 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Topaz	24 g	60 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	25 g	15 min	12.5 %
Aroma (end of boil)	Centennial	25 g	10 min	8.5 %
Aroma (end of boil)	Simcoe	25 g	5 min	13.1 %

Aroma (end of boil)	Citra	25 g	1 min	12 %
Dry Hop	Centennial	50 g	5 day(s)	9.4 %
Dry Hop	Amarillo	50 g	5 day(s)	7.5 %
Dry Hop	Simcoe	50 g	5 day(s)	13.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	160 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	4 g	Mash	---
Water Agent	chlerek wapnia [ml]	2.6 g	Mash	---
Water Agent	kwas mlekowy 80% [ml]	4.96 g	Mash	---
Water Agent	sól epsom	2 g	Mash	---
Fining	mech irlandzki	3 g	Boil	5 min