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- Gravity **11.9 BLG**
- ABV ---
- IBU **43**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.8 liter(s)**
- Total mash volume **10.4 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **7.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **75 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	GlobalMalt Pale Ale/Pils	2 kg (76.9%)	82 %	4.5
Grain	Płatki owsiane	0.25 kg (9.6%)	85 %	3
Grain	GlobalMalt Monachijski I	0.25 kg (9.6%)	80.2 %	16
Grain	GlobalMalt Pszeniczny	0.1 kg (3.8%)	84 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	10 g	60 min	12.4 %
Whirlpool	Mosaic	30 g	5 min	12 %
Wrzucone zaraz po wyłączeniu palnika				
Whirlpool	Citra	30 g	5 min	12.8 %
Wrzucone zaraz po wyłączeniu palnika				
Dry Hop	Mosaic	25 g	2 day(s)	12 %
Dry Hop	Citra	25 g	2 day(s)	12.8 %

Yeasts

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

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	1000 ml	Fermentum Mobile
Starter 2 dni 1L				