

maxipa

- Gravity **14.7 BLG**
- ABV ---
- IBU **45**
- SRM **21.9**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **40 min**
- Temp **71 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **71C**
- Keep mash **5 min** at **78C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.2 kg (55.2%)	81 %	4
Grain	Strzegom Monachijski typ I	1 kg (17.2%)	79 %	16
Grain	Strzegom Karmel 150	0.7 kg (12.1%)	75 %	150
Grain	Jęczmień palony	0.1 kg (1.7%)	55 %	985
Grain	Żytni	0.8 kg (13.8%)	85 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	15 g	50 min	10.5 %
Boil	Marynka	15 g	45 min	9.6 %
Boil	Amarillo	15 g	40 min	9.5 %
Aroma (end of boil)	Cascade	20 g	10 min	6 %
Aroma (end of boil)	Willamette	20 g	5 min	5 %
Aroma (end of boil)	Simcoe	10 g	0 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis