

takaAIPaKa

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **40**
- SRM **12.1**
- Style **American Pale Ale**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **58 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (70.2%)	80 %	4
Grain	Pszeniczny	0.5 kg (8.8%)	85 %	4
Grain	Strzegom Karmel 300	0.5 kg (8.8%)	70 %	299
Grain	Płatki owsiane	0.7 kg (12.3%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Citra	15 g	15 min	12 %
Aroma (end of boil)	Mosaic	15 g	15 min	10 %
Aroma (end of boil)	Ahtanum	15 g	7 min	5 %
Aroma (end of boil)	Citra	15 g	7 min	12 %
Whirlpool	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
80°C				
Whirlpool	Simcoe	25 g	30 min	13.2 %
80°C				

Dry Hop	Citra	20 g	5 day(s)	12 %
Dry Hop	Columbus/Tomahawk/Zeus	20 g	5 day(s)	15.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	4 g	Mash	0 min
Fining	mech irlandzki	5 g	Boil	15 min
Spice	trawa cytrynowa	10 g	Boil	15 min