

Gapa

- Gravity **13.1 BLG**
- ABV ---
- IBU **43**
- SRM **4.9**
- 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 **2.66 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **74.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (66.7%)	80 %	5
Grain	Strzegom Pilzneński	0.6 kg (10%)	80 %	4
Grain	Pszeniczny	0.5 kg (8.3%)	85 %	4
Grain	Monachijski	0.9 kg (15%)	80 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	60 min	12 %
Boil	Cascade	10 g	60 min	6 %
Boil	Citra	10 g	20 min	12 %
Boil	Cascade	5 g	20 min	6 %
Aroma (end of boil)	Citra	20 g	10 min	12 %
Aroma (end of boil)	Cascade	20 g	10 min	6 %
Dry Hop	Citra	20 g	5 day(s)	12 %
Dry Hop	Cascade	30 g	5 day(s)	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---