

KassApa3

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **25**
- SRM **10.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **15.3 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.5 liter(s)** of **76C** water or to achieve **15.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	1.78 kg (52.5%)	80 %	7
Grain	Weyermann - Carawheat	0.18 kg (5.3%)	77 %	115
Grain	Acid Malt	0.03 kg (0.9%)	58.7 %	6
Grain	Viking melanoidynowy	0.14 kg (4.1%)	75 %	60
Grain	Strzegom Wiedeński	0.27 kg (8%)	79 %	10
Grain	Rice, Flaked	0.11 kg (3.2%)	70 %	2
Grain	Monachijski	0.44 kg (13%)	80 %	16
Grain	Oats, Flaked	0.22 kg (6.5%)	80 %	2
Grain	Wheat, Flaked	0.18 kg (5.3%)	77 %	4
Grain	Strzegom Czekoladowy jasny	0.04 kg (1.2%)	68 %	400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	20 g	60 min	4.5 %
Boil	Cascade	10 g	30 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP004	Ale	Slant	100 ml	---