

apa

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **44**
- SRM **6.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (66.7%)	80 %	4
Grain	Płatki pszeniczne	0.8 kg (17.8%)	85 %	3
Grain	Strzegom Karmel 30	0.1 kg (2.2%)	75 %	30
Grain	Caraaroma	0.1 kg (2.2%)	78 %	400
Sugar	Cane (Beet) Sugar	0.5 kg (11.1%)	100 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnat	20 g	60 min	12.4 %
Whirlpool	Citra	20 g	600 min	5 %
Whirlpool	Amarillo	20 g	600 min	5 %
Whirlpool	Equinox	20 g	600 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
US West Coast	Ale	Dry	10 g	Gozdawa