

## #107 APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **29**
- SRM **4.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **14 %/h**
- Boil size **22.7 liter(s)**

### Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **67 C**, Time **80 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **21.6 liter(s)** of strike water to **72.2C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **40 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.65 kg (34.4%)	80 %	4
Grain	Viking Pale Ale malt	1.55 kg (32.3%)	80 %	5
Grain	Strzegom Pszeniczny	0.95 kg (19.8%)	81 %	6
Grain	Płatki owsiane	0.65 kg (13.5%)	80 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	8 g	45 min	11 %
Whirlpool	Amarillo	16 g	10 min	9.8 %
Whirlpool	Hallertau Blanc	6.3 g	10 min	8.9 %
Whirlpool	Galaxy	25 g	10 min	14.2 %
Whirlpool	Simcoe	20 g	10 min	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	120 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	WhirlFloc	1.25 g	Boil	12 min
Water Agent	CaCl <sub>2</sub>	2 g	Mash	60 min