

## APA - warsztaty 13.09. Kraków

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **37**
- SRM **4.6**
- 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 **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **1 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (74.5%)	81 %	4
Grain	Strzegom Monachijski typ I	1 kg (21.3%)	79 %	16
Grain	Pszeniczny	0.2 kg (4.3%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	60 min	12.9 %
Boil	Citra	10 g	15 min	12.9 %
Boil	Amarillo	10 g	15 min	10.5 %
Aroma (end of boil)	Citra	10 g	2 min	12.9 %
Aroma (end of boil)	Amarillo	30 g	2 min	10.5 %
Dry Hop	Amarillo	25 g	1 day(s)	10.5 %
Dry Hop	Citra	30 g	1 day(s)	13.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis