

## APA - wiosenne czyszczenie magazynu

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **38**
- SRM **14.3**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **55 C**, Time **7 min**
- Temp **64 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **7 min** at **55C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (54.6%)	80 %	4
Grain	Abbey Malt Weyermann	0.5 kg (9.1%)	75 %	45
Grain	Monachijski Ciemny Steinbach	0.55 kg (10%)	100 %	30
Grain	Płatki owsiane	0.4 kg (7.3%)	85 %	3
Grain	Special B Malt	0.2 kg (3.6%)	65.2 %	315
Grain	Caramel/Crystal Malt - 120L	0.4 kg (7.3%)	72 %	150
Grain	Karmelowy żytni Strzegom	0.34 kg (6.2%)	75 %	150
Grain	Karmelowy Jasny 30EBC	0.1 kg (1.8%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.7 %

Boil	Chinook	10 g	30 min	11.3 %
Aroma (end of boil)	Citra	30 g	0 min	13.7 %
Aroma (end of boil)	Centennial	13 g	0 min	8.9 %
Aroma (end of boil)	Mosaic	17 g	0 min	10.4 %