#015 APA "dyrektorskie" [US-05 Simcoe/Centennial/Cascade]

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **38**
- SRM **14.2**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **13.7 liter(s)**

Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **10.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2 kg *(65.6%)*	79 %	6
Grain	Strzegom Monachijski typ II	0.5 kg *(16.4%)*	79 %	22
Grain	Strzegom Karmel 300	0.3 kg *(9.8%)*	70 %	299
Grain	Oats, Flaked	0.25 kg *(8.2%)*	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	5 g	60 min	12.1 %
Boil	Simcoe	10 g	15 min	12.6 %
Boil	Centennial	10 g	15 min	9.4 %
Boil	Cascade PL	10 g	15 min	6.3 %
Whirlpool	Simcoe	20 g	0 min	12.6 %
Flame out - na wyłączenie palnika				
Whirlpool	Centennial	20 g	0 min	9.4 %
Flame out - na wyłączenie palnika				
Whirlpool	Cascade PL	20 g	0 min	6.3 %

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Flame out - na wyłączenie palnika				
Whirlpool	Simcoe	20 g	0 min	12.6 %
Hop stand - podczas chłodzenia gdy temp. osiągnie 80°C				
Whirlpool	Centennial	20 g	0 min	9.4 %
Hop stand - podczas chłodzenia gdy temp. osiągnie 80°C				
Whirlpool	Cascade PL	20 g	0 min	6.3 %
Hop stand - podczas chłodzenia gdy temp. osiągnie 80°C				

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	2 g	Boil	15 min

Notes

- Zbyt szybko spadła temperatura brzeczki po gotowaniu (woda do chłodzenia miała tylko 10,5°C) poniżej 70°C dlatego nie dałem porcji chmielu na hop stand.
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