Trening jakościowy

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **35**
- SRM **5**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **23.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód Pale Ale	4 kg *(68.4%)*	79 %	6
Grain	słód pszeniczny Heidelberg	0.6 kg *(10.3%)*	82 %	3
Grain	słód Pale Ale Maris Otter	1 kg *(17.1%)*	80 %	5
Adjunct	płatki owsiane	0.25 kg *(4.3%)*	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook (USA)	46 g	20 min	11.6 %
Aroma (end of boil)	Amarillo (USA)	20 g	0 min	8.7 %
Aroma (end of boil)	Simcoe (USA)	20 g	0 min	13.2 %
Aroma (end of boil)	Centennial (USA)	20 g	0 min	10.2 %
Dry Hop	Citra (USA)	20 g	14 day(s)	13.7 %
Dry Hop	Simcoe (USA)	20 g	14 day(s)	13.2 %
Dry Hop	Amarillo (USA)	20 g	14 day(s)	8.7 %
Dry Hop	Mosaic (USA)	20 g	14 day(s)	12 %
Dry Hop	Citra (USA)	30 g	2 day(s)	13.7 %
Dry Hop	Simcoe (USA)	30 g	2 day(s)	13.2 %

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Dry Hop	Amarillo (USA)	30 g	2 day(s)	8.7 %
Dry Hop	Mosaic (USA)	30 g	2 day(s)	12 %

Yeasts

Name	**Type**	**Form**	**Amount**	**Laboratory**
Safeale S-33	Ale	Slant	200 ml	Fermentis

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