29#IPA18

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **79**
- SRM **30.8**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **66 C**, Time **90 min**
- Temp **78 C**, Time **30 min**
- Temp **100 C**, Time **90 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **90 min** at **66C**
- Keep mash **30 min** at **78C**
- Keep mash **90 min** at **100C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	5.5 kg *(78.6%)*	80 %	7
Grain	Strzegom Karmel 150	0.4 kg *(5.7%)*	75 %	150
Grain	Monachijski Ciemny Steinbach	0.6 kg *(8.6%)*	100 %	30
Grain	Weyermann - Carafa III	0.3 kg *(4.3%)*	70 %	1024
Grain	Strzegom pszenica prażona	0.2 kg *(2.9%)*	70 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	35 g	90 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	20 g	50 min	15.5 %
Boil	Cascade PL	20 g	5 min	5.2 %
Boil	Centennial	20 g	2 min	10.5 %
Dry Hop	Ahtanum	25 g	7 day(s)	5 %
Dry Hop	Cascade	20 g	5 day(s)	6 %
Dry Hop	Centennial	10 g	4 day(s)	10.5 %

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Dry Hop	Simcoe	20 g	3 day(s)	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Slant	50 ml	Fermentum Mobile