

C-3PO

- Gravity **13 BLG**
- ABV ---
- IBU **33**
- SRM **6.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **29 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 **67 C**, Time **60 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4.5 kg (81.8%)	79 %	6
Grain	Strzegom Monachijski typ II	0.75 kg (13.6%)	79 %	22
Grain	Pszeniczny	0.25 kg (4.5%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	20 min	15.5 %
Boil	Equinox	10 g	15 min	13.1 %
Boil	Citra	10 g	15 min	12 %
Boil	Citra	10 g	10 min	12 %
Boil	Cascade	10 g	10 min	6 %
Boil	Cascade	10 g	5 min	6 %
Boil	Citra	10 g	5 min	12 %
Aroma (end of boil)	Citra	20 g	0 min	12 %
Aroma (end of boil)	Cascade	20 g	0 min	6 %
Aroma (end of boil)	Equinox	20 g	0 min	13.1 %
Dry Hop	Equinox	20 g	3 day(s)	13.1 %
Dry Hop	Citra	20 g	3 day(s)	12 %
Dry Hop	Cascade	20 g	3 day(s)	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis