

2#

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **29**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (55.6%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (15.9%)	79 %	16
Grain	Strzegom Wiedeński	1 kg (15.9%)	79 %	10
Adjunct	Pszenica niestodowana	0.8 kg (12.7%)	75 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Equinox	20 g	40 min	13.1 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	10 g	10 min	15.5 %
Aroma (end of boil)	Cashmere	10 g	10 min	7 %
Whirlpool	Chinook	30 g	20 min	13 %
Whirlpool	Equinox	10 g	20 min	13.1 %
Dry Hop	Columbus/Tomahawk/Zeus	20 g	5 day(s)	15.5 %
Dry Hop	Ahtanum	30 g	5 day(s)	5 %
Dry Hop	Cashmere	20 g	5 day(s)	7 %

Yeasts

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