apa

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **33**
- SRM **8.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg *(42.9%)*	80 %	4
Grain	Strzegom Monachijski typ I	3 kg *(42.9%)*	79 %	16
Grain	Strzegom Karmel 30	1 kg *(14.3%)*	75 %	50

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	13.5 %
Boil	Citra	10 g	30 min	12 %
Boil	Magnum	15 g	10 min	13.5 %
Boil	Citra	15 g	10 min	12 %
Aroma (end of boil)	Magnum	5 g	5 min	13.5 %
Aroma (end of boil)	Citra	5 g	5 min	12 %

Yeasts

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

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