apka

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **41**
- SRM **5.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

Steps

- Temp **66 C**, Time **70 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg *(33.3%)*	80 %	4
Grain	Viking Pale Ale malt	2.5 kg *(41.7%)*	80 %	5
Grain	Carahell	1 kg *(16.7%)*	77 %	26
Grain	płatki jęczmienne	0.5 kg *(8.3%)*	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	55 min	10.3 %
Boil	lunga	10 g	25 min	10.3 %
Boil	Izabella	30 g	10 min	6.8 %
Boil	Centennial	30 g	5 min	11.3 %
Boil	Zythos	30 g	1 min	9.2 %
Dry Hop	Zythos	30 g	4 day(s)	9.2 %
Dry Hop	Centennial	30 g	4 day(s)	11.3 %
Dry Hop	Hallertau Tradition	30 g	4 day(s)	4.3 %

Yeasts

Name	Type	Form	Amount	Laboratory

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

us-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	12 g	Boil	15 min