Gorzkie Ż'ALE

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **120**
- SRM **10.8**
- Style **Imperial IPA**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **3 %**
- Size with trub loss **41.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **51.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **42 liter(s)**
- Total mash volume **56 liter(s)**

Steps

- Temp **65 C**, Time **75 min**

Mash step by step

- Heat up **42 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **75 min** at **65C**
- Sparge using **23.2 liter(s)** of **76C** water or to achieve **51.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	12 kg *(80%)*	79 %	6
Grain	Strzegom Monachijski typ I	1 kg *(6.7%)*	79 %	16
Grain	Strzegom Karmel 150	1 kg *(6.7%)*	75 %	150
Sugar	Corn Sugar (Dextrose)	1 kg *(6.7%)*	100 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	80 g	80 min	13 %
Boil	Columbus/Tomahawk/Zeus	50 g	80 min	15.5 %
Boil	Chinook	50 g	45 min	13 %
Boil	Columbus/Tomahawk/Zeus	25 g	30 min	15.5 %
Aroma (end of boil)	Cascade PL	90 g	0 min	5.2 %
Dry Hop	Columbus/Tomahawk/Zeus	175 g	0 day(s)	15.5 %
Dry Hop	Citra	100 g	0 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	38.26 g	Fermentis

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

Notes

- Fermentacja burzliwa - 10 dni w 20 stopniach + Columbus
  Fermentacja cicha - 7 dni + Citra
  IBU około 150-180
  Feb 15, 2018, 11:01 AM