Polskie Torpedo

- Gravity **16.2 BLG**
- ABV **---**
- IBU **45**
- SRM **8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **3 %**
- Size with trub loss **19.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23 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 **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **0 min**
- Temp **100 C**, Time **60 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **77C**
- Keep mash **60 min** at **100C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **23 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg *(54.5%)*	80 %	4
Grain	Strzegom Pale Ale	2 kg *(36.4%)*	79 %	6
Grain	Briess - Caramel Malt 20L	0.5 kg *(9.1%)*	76 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Aroma (end of boil)	Summer	25 g	15 min	5.3 %
Aroma (end of boil)	Summer	25 g	10 min	5.3 %
Aroma (end of boil)	Crystal	50 g	0 min	4.5 %
Dry Hop	Crystal	40 g	8 day(s)	4.5 %
Dry Hop	Citra	30 g	8 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory

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

Safale S-05	Ale	Dry	11.5 g	Safale