Hazy APA #1 (Amora Preta) - Browar na Wyżynie

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **25**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **4 %**
- Size with trub loss **22.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Viking Malt	4 kg *(75.5%)*	80 %	6
Grain	dekstrynowy Viking Malt	0.5 kg *(9.4%)*	79 %	16
Grain	Płatki owsiane	0.4 kg *(7.5%)*	70 %	3
Grain	Płatki orkiszowe pełnoziarniste błyskawiczne	0.4 kg *(7.5%)*	70 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Amora Preta (Polishhops)	10 g	100 min	9.9 %
Boil	Amora Preta (Polishhops)	20 g	20 min	9.9 %
Whirlpool	Amora Preta (Polishhops)	70 g	0 min	9.9 %
Dry Hop	Amora Preta (Polishhops)	100 g	3 day(s)	9.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Liquid	1000 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	siarczan wapnia	2 g	Mash	60 min
Water Agent	chlorek wapnia	6 g	Mash	60 min
Water Agent	kwas fosforowy 75% zacier	5 g	Mash	60 min
Water Agent	kwas fosforowy 75% wysładzanie	2 g	Mash	60 min
Other	siarczan cynku	2 g	Boil	0 min

Notes

- Whirpool 30 minut temp.<80C
  https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=XMKYKM0
  Ca+2 Mg+2 Na+ Cl- SO4-2 HCO
  Actual 58.4 0.0 131.0 99.4 58.0 0.055
  Mash pH *: 5.25
  SO42-/Cl- ratio: 0.6 Very Malty
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