

# 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 | chlerek wapnia                   | 6 g    | Mash    | 60 min |
| Water Agent | kw. fosforowy 75%<br>zacier      | 5 g    | Mash    | 60 min |
| Water Agent | kw. fosforowy 75%<br>wysładzanie | 2 g    | Mash    | 60 min |
| Other       | siarczan cynku                   | 2 g    | Boil    | 0 min  |

### Notes

- Whirlpool 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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