

(Sour) APA

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------------|--------------|--------|-----|
| Grain | Pilzneński | 3.5 kg (70%) | 81 % | 4 |
| Grain | BESTMALZ - Best Heidelberg Wheat Malt | 1 kg (20%) | 82 % | 3 |
| Grain | Castlemalting - Cara Clair | 0.25 kg (5%) | 78 % | 4 |
| Grain | Abbey Castle | 0.2 kg (4%) | 80 % | 45 |
| Grain | Acid Malt | 0.05 kg (1%) | 58.7 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil | lunga | 10 g | 60 min | 11 % |
| Boil | Mosaic | 25 g | 20 min | 10 % |
| Boil | Citra | 10 g | 20 min | 14 % |
| Boil | Chinook | 15 g | 0 min | 13 % |
| Boil | Citra | 15 g | 0 min | 12 % |
| Whirlpool | Chinook | 30 g | 20 min | 13 % |
| Dry Hop | Citra | 25 g | 3 day(s) | 12 % |
| Dry Hop | Chinook | 25 g | 3 day(s) | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|--------|----------|--------|
| Water Agent | Gips | 5 g | Mash | 60 min |
| Water Agent | Lactic Acid | 5 g | Mash | 60 min |
| Fining | Whirlfloc | 2.5 g | Boil | 10 min |
| Flavor | Lactic Acid | 2.4 g | Bottling | --- |

Notes

- Połowa butelek zostanie zakwaszona po 2.4 ml/0.5l kwasu mlekowego.
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