

IPAAAAA

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **32**
- SRM **3.9**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **38.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **48.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30 liter(s)**
- Total mash volume **40 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **52 C**, Time **20 min**
- Temp **65 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **30 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **20 min** at **52C**
- Keep mash **20 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **28.9 liter(s)** of **76C** water or to achieve **48.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|--------|-----|
| Grain | Viking Pilsner malt | 6 kg (60%) | 82 % | 4 |
| Grain | Pszeniczny | 0.5 kg (5%) | 85 % | 4 |
| Grain | Płatki pszeniczne | 1 kg (10%) | 85 % | 3 |
| Grain | Płatki owsiane | 1.5 kg (15%) | 85 % | 3 |
| Grain | Żytni | 1 kg (10%) | 85 % | 8 |
| Sugar | Milk Sugar (Lactose) | 0 kg | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | lunga | 60 g | 40 min | 11 % |
| Aroma (end of boil) | Cascade PL | 30 g | 0 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------------|--------|----------|----------|
| Flavor | pulpa z mango 1 warka | 1600 g | Primary | 3 day(s) |
| Flavor | earl grey 2 warka | 50 g | Bottling | --- |
| Other | kwiat hibiskusa | 50 g | Boil | 15 min |

Notes

- wszystko do 45 stopni 20 min przerwy
1/3 na dekokcje
65 stopni- 30 min
72stopnie - 55 min
gotowanie - 15 min
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