

APA + Herbata

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **42**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **17.6 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **15 min** at **72C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (68.4%) | 80 % | 5 |
| Grain | Pilzneński | 1.4 kg (23.9%) | 81 % | 4 |
| Grain | Strzegom Monachijski typ I | 0.3 kg (5.1%) | 79 % | 16 |
| Grain | Carabelge | 0.15 kg (2.6%) | 74 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 12 g | 60 min | 16.1 % |
| Boil | Columbus/Tomahawk/Zeus | 10 g | 30 min | 16.1 % |
| Aroma (end of boil) | Mosaic | 15 g | 10 min | 12 % |
| Aroma (end of boil) | Mosaic | 15 g | 5 min | 12 % |
| Aroma (end of boil) | Mosaic | 20 g | 1 min | 12 % |
| Dry Hop | Cashmere | 50 g | 4 day(s) | 8.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 11 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------------------|--------|----------|-------|
| Other | Herbata Liściasta | 5 g | Boil | 5 min |
| Other | Herbata Owocowa | 25 g | Mash | 0 min |
| Other | Herbata Owocowa | 25 g | Bottling | --- |
| Flavor | Lipton Żółty 10 torebek | 20 g | Boil | 2 min |

Notes

- Herbata liściasta czarna (20g):
Parzona przez 1,5 minuty w wodzie filtrowanej i dolana do kotła.

+ herbata owocowa (25g) parzona 5 minut również w brzeczce i dolana do kotła.

+ herbata owocowa (25g) do wysładzania.

+ herbata owocowa 50g do rozlewu zamiast wody

zaparzona w brzeczce w oddzielnym garnku przez 1,5 minut, odfiltrowana i dodana na ostatnie 5 minut gotowania.

Przy rozlewie rozpuszczenie cukru w 25g herbaty owocowej i 10g czarnej liściastej i dodanie do butelkowania.
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