

3 bro IPA

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **67**
- SRM **6.9**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.5 kg (81.8%) | 80 % | 5 |
| Grain | Viking melanoidynowy | 0.5 kg (9.1%) | 75 % | 60 |
| Grain | Strzegom Monachijski typ I | 0.5 kg (9.1%) | 79 % | 18 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Warrior | 20 g | 60 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 20 g | 30 min | 15.5 % |
| Aroma (end of boil) | Mosaic | 15 g | 10 min | 10 % |
| Aroma (end of boil) | Centennial | 15 g | 10 min | 10.5 % |
| Dry Hop | Centennial | 15 g | 7 day(s) | 10.5 % |
| Dry Hop | Mosaic | 15 g | --- | 10 % |
| Dry Hop | Warrior | 10 g | 7 day(s) | 15.5 % |
| Dry Hop | Columbus/Tomahawk/Zeus | 10 g | 7 day(s) | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

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|--------------|-----|-----|------|-----------|
| Safale US-05 | Ale | Dry | 20 g | Fermentis |
|--------------|-----|-----|------|-----------|