

IPA 2

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **54**
- SRM **8.3**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **1 %**
- Size with trub loss **28.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **32.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **30 liter(s)**

Steps

- Temp **60 C**, Time **1 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **65C**
- Add grains
- Keep mash **1 min** at **60C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **32.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (83.3%) | 80 % | 5 |
| Grain | Simpsons - Golden Promise | 0.5 kg (8.3%) | 81 % | 4 |
| Grain | Fawcett - Crystal | 0.5 kg (8.3%) | 70 % | 160 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------------|--------|--------|------------|
| Aroma (end of boil) | Michigan copper usa | 10 g | 10 min | 10.5 % |
| Aroma (end of boil) | Strata | 10 g | 10 min | 13.6 % |
| Aroma (end of boil) | Palisade | 10 g | 10 min | 7.5 % |
| Aroma (end of boil) | Michigan copper usa | 10 g | 0 min | 10.5 % |
| Aroma (end of boil) | Strata | 10 g | 0 min | 13.6 % |
| Aroma (end of boil) | Palisade | 10 g | 0 min | 7.5 % |
| Whirlpool | Michigan copper usa | 30 g | 80 min | 10.5 % |
| chłodzenie 80stopni | | | | |
| Whirlpool | Strata | 30 g | 80 min | 13.6 % |

| | | | | |
|---------------------|---------------------|------|----------|--------|
| chłodzenie 80stopni | | | | |
| Whirlpool | Palisade | 30 g | 80 min | 7.5 % |
| chłodzenie 80stopni | | | | |
| Dry Hop | Michigan copper usa | 50 g | 4 day(s) | 10.5 % |
| Dry Hop | Strata | 50 g | 4 day(s) | 13.6 % |
| Dry Hop | Palisade | 50 g | 4 day(s) | 7.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 250 ml | Fermentis |