

Red

- Gravity **15.9 BLG**
- ABV ---
- IBU **52**
- SRM **14**
- Style **Red IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **15 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **71 C**, Time **15 min**
- Temp **77 C**, Time **4 min**

Mash step by step

- Heat up **21.2 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **71C**
- Keep mash **4 min** at **77C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|-----------------|--------|-----|
| Grain | Weyermann - Pale Ale Malt | 4 kg (66.1%) | 85 % | 7 |
| Grain | Carared | 1 kg (16.5%) | 75 % | 39 |
| Grain | Chit Malt | 0.75 kg (12.4%) | 50 % | 2 |
| Grain | Caraaroma | 0.1 kg (1.7%) | 78 % | 400 |
| Grain | Caramunich Malt | 0.1 kg (1.7%) | 71.7 % | 110 |
| Grain | Weyermann - Melanoiden Malt | 0.1 kg (1.7%) | 81 % | 53 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|--------|------------|
| Boil | Magnum | 20 g | 60 min | 13.5 % |
| Boil | Columbus/Tomahawk/Zeus | 10 g | 30 min | 16.7 % |
| Boil | Cascade | 25 g | 15 min | 6.7 % |
| Boil | Octawia | 20 g | 10 min | 7.1 % |
| Boil | Amarillo | 20 g | 5 min | 9.5 % |
| Whirlpool | Amarillo | 20 g | 10 min | 9.5 % |
| Whirlpool | Mosaic | 10 g | 10 min | 10 % |

| | | | | |
|---------|---------|------|----------|------|
| Dry Hop | Mosaic | 20 g | 4 day(s) | 10 % |
| Dry Hop | Cascade | 30 g | 4 day(s) | 6 % |
| Dry Hop | Citra | 20 g | 4 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale | Slant | 300 ml | Fermentum Mobile |