

MS3

- Gravity **17.7 BLG**
- ABV ---
- IBU **75**
- SRM **7.4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **31.2 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **75C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 7.5 kg (96.2%) | 85 % | 7 |
| Grain | Weyermann - Carapils | 0.3 kg (3.8%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Citra | 20 g | 60 min | 12 % |
| Boil | Amarillo | 20 g | 60 min | 9.5 % |
| Boil | Cascade | 20 g | 60 min | 6 % |
| Boil | Citra | 10 g | 10 min | 12 % |
| Boil | Amarillo | 10 g | 10 min | 9.5 % |
| Boil | Cascade | 10 g | 10 min | 6 % |
| Dry Hop | Citra | 10 g | 3 day(s) | 12 % |
| Dry Hop | Amarillo | 10 g | 3 day(s) | 9.5 % |
| Dry Hop | Cascade | 10 g | 3 day(s) | 6 % |
| Boil | Marynka | 30 g | 60 min | 10 % |
| Whirlpool | Amarillo | 10 g | 10 min | 9.5 % |
| Whirlpool | Citra | 10 g | 10 min | 12 % |

| | | | | |
|-----------|---------|------|--------|-----|
| Whirlpool | Cascade | 10 g | 10 min | 6 % |
|-----------|---------|------|--------|-----|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |