

## #15 Z

- Gravity **9 BLG**
- ABV **3.5 %**
- IBU **36**
- SRM **3.7**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.3 liter(s)**
- Total mash volume **7 liter(s)**

### Steps

- Temp **70 C**, Time **60 min**

### Mash step by step

- Heat up **5.3 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 1.3 kg (74.3%) | 85 %  | 7   |
| Grain | Weyermann - Rye Malt      | 0.3 kg (17.1%) | 85 %  | 7   |
| Grain | Wheat, Flaked             | 0.15 kg (8.6%) | 77 %  | 4   |

### Hops

| Use for   | Name    | Amount | Time     | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil      | Citra   | 10 g   | 40 min   | 12 %       |
| Whirlpool | Cascade | 20 g   | 30 min   | 6 %        |
| Dry Hop   | Citra   | 30 g   | 3 day(s) | 12 %       |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale  | Dry  | 6 g    | Fermentis  |