

## #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