

## FEZ mint

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- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **62**
- SRM **50.5**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **15.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **19.9 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **29.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **22.6 liter(s)** of strike water to **75.5C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **4.4 liter(s)** of **76C** water or to achieve **19.9 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield | EBC  |
|-------|----------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt             | 3.4 kg (48.2%) | 80 %  | 5    |
| Grain | Caraaroma                        | 0.5 kg (7.1%)  | 78 %  | 400  |
| Grain | Weyermann - Carafa I             | 0.3 kg (4.3%)  | 70 %  | 690  |
| Grain | Strzegom Monachijski typ II      | 1 kg (14.2%)   | 79 %  | 22   |
| Grain | Płatki owsiane                   | 0.4 kg (5.7%)  | 60 %  | 3    |
| Grain | Strzegom Pilzneński              | 0.5 kg (7.1%)  | 80 %  | 4    |
| Grain | Strzegom Czekoladowy ciemny      | 0.25 kg (3.5%) | 68 %  | 1200 |
| Grain | Jęczmień palony                  | 0.2 kg (2.8%)  | 55 %  | 985  |
| Grain | Słód pszeniczny ciemny wayermann | 0.5 kg (7.1%)  | 81 %  | 17   |

### Hops

| Use for   | Name                   | Amount | Time   | Alpha acid |
|-----------|------------------------|--------|--------|------------|
| Boil      | Columbus/Tomahawk/Zeus | 25 g   | 60 min | 14.5 %     |
| Whirlpool | Sabro                  | 15 g   | 30 min | 15 %       |
| Boil      | Columbus/Tomahawk/Zeus | 10 g   | 50 min | 14.5 %     |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM12 W szkocką kratę | Ale  | Slant | 300 ml | Fermentum Mobile |