

## BAD

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **22**
- SRM **4.5**
- Style **Vienna Lager**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **12.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.3 liter(s)**
- Total mash volume **9.8 liter(s)**

### Steps

- Temp **50 C**, Time **20 min**
- Temp **66 C**, Time **45 min**

### Mash step by step

- Heat up **7.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **45 min** at **66C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **12.9 liter(s)** of wort

### Fermentables

| Type  | Name                                   | Amount          | Yield | EBC |
|-------|--|-----------------|-------|-----|
| Grain | Weyermann - Bohemian Pilsner Malt      | 1.85 kg (75.5%) | 81 %  | 4   |
| Grain | Weyermann - Carapils                   | 0.3 kg (12.2%)  | 78 %  | 4   |
| Grain | Monachijski typ II 20-25 EBC Weyermann | 0.3 kg (12.2%)  | 80 %  | 20  |

### Hops

| Use for             | Name      | Amount | Time   | Alpha acid |
|---------------------|-----------|--------|--------|------------|
| Boil                | Perle     | 10 g   | 60 min | 7 %        |
| Boil                | Tradition | 5 g    | 20 min | 5.5 %      |
| Aroma (end of boil) | Tradition | 10 g   | 5 min  | 5.5 %      |

### Yeasts

| Name          | Type  | Form | Amount | Laboratory                         |
|---------------|-------|------|--------|------------------------------------|
| Saflager S-23 | Lager | Dry  | 5.5 g  | Fermentis Division of S.I.Lesaffre |