

lager am

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **3.5**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **26.9 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **18.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **20 min** at **72C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|--------|-----|
| Grain | Briess - Pilsen Malt | 4 kg (76.9%) | 80.5 % | 2 |
| Grain | Pszeniczny | 0.5 kg (9.6%) | 85 % | 4 |
| Grain | Monachijski | 0.5 kg (9.6%) | 80 % | 16 |
| Grain | Weyermann - Acidulated Malt | 0.2 kg (3.8%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Aroma (end of boil) | Citra | 30 g | 30 min | 12 % |
| Whirlpool | Amarillo | 50 g | 0 min | 9.5 % |
| Whirlpool | Citra | 20 g | 0 min | 12 % |
| Dry Hop | citra | 50 g | 5 day(s) | 12 % |
| Dry Hop | Amarillo | 100 g | 5 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------|-------|-------|--------|------------|
| safale w34 | Lager | Slant | 200 ml | --- |