

ZeGerman

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **38**
- SRM **3.4**
- Style **Classic American Pilsner**

Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **31.9 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **30.3 liter(s)**
- Total mash volume **35.8 liter(s)**

Steps

- Temp **62 C**, Time **120 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **30.3 liter(s)** of strike water to **65.8C**
- Add grains
- Keep mash **120 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **31.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Pilzneński | 4.5 kg (81.8%) | 81 % | 4 |
| Grain | Fawcett - Flaked Maize | 0.5 kg (9.1%) | 90 % | 4 |
| Grain | Rice, Flaked | 0.5 kg (9.1%) | 91 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Magnum | 15 g | 90 min | 12 % |
| Boil | Liberty | 20 g | 25 min | 4.5 % |
| Boil | Sterling | 20 g | 25 min | 4.5 % |
| Boil | Liberty | 15 g | 15 min | 4.5 % |
| Boil | Sterling | 15 g | 15 min | 4.5 % |
| Boil | Liberty | 15 g | 5 min | 4.5 % |
| Boil | Sterling | 15 g | 5 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-----------------------------|-------|-------|--------|------------|
| WLP830 - German Lager Yeast | Lager | Slant | 150 ml | White Labs |
| Saflager W 34/70 | Lager | Slant | 150 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------|--------|---------|--------|
| Fining | Whirlfloc | 1 g | Boil | 15 min |