

Farbowany lis

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **12.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **55 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **72C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 2 kg (34.5%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 2.5 kg (43.1%) | 79 % | 10 |
| Grain | Strzegom Czekoladowy 400 | 0.3 kg (5.2%) | 68 % | 400 |
| Grain | Monachijski | 1 kg (17.2%) | 80 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------|--------|----------|------------|
| Boil | Magnum | 20 g | 60 min | 12 % |
| Aroma (end of boil) | Hallertau | 20 g | 10 min | 4.5 % |
| Dry Hop | Hallertau | 30 g | 5 day(s) | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|----------------|------|------|--------|
| Fining | mech irlandzki | 10 g | Boil | 15 min |
|--------|----------------|------|------|--------|