

Konkursowe Munich Helles

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **20**
- SRM **4**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **11.3 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|-----------------------------|----------------|-------|-----|
| Grain | BESTMALZ - Best Pilsen | 3.2 kg (83.1%) | 95 % | 4 |
| Grain | Monachijski | 0.4 kg (10.4%) | 95 % | 16 |
| Grain | Weyermann - Melanoiden Malt | 0.15 kg (3.9%) | 95 % | 40 |
| Adjunct | Rice Hulls | 0.1 kg (2.6%) | 1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Marynka | 15 g | 60 min | 10 % |
| Boil | Lublin (Lubelski) | 20 g | 10 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------------|-------|--------|--------|-------------|
| Wyeast - 2206 Bavarian Lager | Lager | Liquid | 125 ml | Wyeast Labs |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------------|--------|---------|--------|
| Water Agent | Kwas mlekowy | 12 g | Mash | --- |
| Other | Pożywka drożdżowa | 4 g | Boil | 10 min |