

# Konkursowe Munich Helles

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- 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 |