

# Dunkles I miejsce Małopolski 2024

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **22**
- SRM **15.5**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **0 %**
- Size with trub loss **60 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **70.6 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45.9 liter(s)**
- Total mash volume **61.2 liter(s)**

## Steps

- Temp **50 C**, Time **10 min**
- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **45.9 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **40 liter(s)** of **76C** water or to achieve **70.6 liter(s)** of wort

## Fermentables

| Type  | Name   | Amount         | Yield | EBC  |
|-------|--|----------------|-------|------|
| Grain | Monachijski typ II<br>20-25 EBC<br>Weyermann | 10 kg (65.4%)  | 80 %  | 20   |
| Grain | Viking Pilsner malt                          | 3.5 kg (22.9%) | 82 %  | 4    |
| Grain | Melanoidynowy<br>Castlemalting               | 1 kg (6.5%)    | 75 %  | 80   |
| Grain | Weyermann -<br>Carared                       | 0.5 kg (3.3%)  | 75 %  | 45   |
| Grain | Fawcett -<br>Pszeniczny<br>Czekoladowy       | 0.3 kg (2%)    | 73 %  | 1001 |

## Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Izabella | 100 g  | 40 min | 6.5 %      |
| Aroma (end of boil) | Izabella | 50 g   | 3 min  | 6.5 %      |