

# Dunkel

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **24**
- SRM **19.7**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **47.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **57.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.5 liter(s)**
- Total mash volume **50 liter(s)**

## Steps

- Temp **61 C**, Time **10 min**
- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **37.5 liter(s)** of strike water to **67.8C**
- Add grains
- Keep mash **10 min** at **61C**
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Sparge using **32.8 liter(s)** of **76C** water or to achieve **57.8 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount      | Yield | EBC |
|-------|-----------------------------|-------------|-------|-----|
| Grain | Strzegom Monachijski typ I  | 5 kg (40%)  | 79 %  | 16  |
| Grain | Cara Ruby Castle            | 1 kg (8%)   | 72 %  | 49  |
| Grain | Weyermann - Melanoiden Malt | 1 kg (8%)   | 81 %  | 53  |
| Grain | Chocolate Malt              | 0.5 kg (4%) | 60 %  | 800 |
| Grain | Strzegom Monachijski typ II | 5 kg (40%)  | 79 %  | 22  |

## Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Lublin (Lubelski) | 100 g  | 60 min | 4.2 %      |
| Boil    | Tettnanger        | 50 g   | 10 min | 3.3 %      |
| Boil    | Tettnanger        | 50 g   | 5 min  | 3.3 %      |

## Yeasts

| Name                               | Type  | Form | Amount | Laboratory      |
|------------------------------------|-------|------|--------|-----------------|
| Mangrove Jack's M84 Bohemian Lager | Lager | Dry  | 23 g   | Mangrove Jack's |

## Notes

- Brzeczka 11.07  
Po 7 dniach 15°  
burzliwa 14 dni  
Cicha 14 dni  
*Mar 11, 2022, 10:49 AM*