# Dunkel

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- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **16**
- SRM **19.5**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.9 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

## Steps

- Temp **62 C**, Time **50 min**
- Temp **70 C**, Time **20 min**

## Mash step by step

- Heat up **17.7 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **20 min** at **70C**
- Sparge using **20.3 liter(s)** of **76C** water or to achieve **32.9 liter(s)** of wort

## Fermentables

| Type | Name | Amount | Yield | EBC |
|---|---|---|---|---|
| Grain | Strzegom Monachijski typ II | 2 kg *(39.6%)* | 79 % | 22 |
| Grain | Pszeniczny | 2.5 kg *(49.5%)* | 85 % | 4 |
| Grain | Cara wheat | 0.35 kg *(6.9%)* | 70 % | 812 |
| Grain | Strzegom Karmel 300 | 0.2 kg *(4%)* | 70 % | 299 |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---|---|---|---|
| Boil | Nadwiślański | 25 g | 65 min | 5.9 % |
| Aroma (end of boil) | Hallertau | 25 g | 5 min | 4.5 % |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|---|---|---|---|
| munich wheat | Wheat | Dry | 10 g | f |