

# Munich DRY STOUT

- Gravity **17.7 BLG**
- ABV ---
- IBU **49**
- SRM **41.6**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.3 liter(s)**
- Total mash volume **28.4 liter(s)**

## Steps

- Temp **58 C**, Time **20 min**
- Temp **66 C**, Time **50 min**
- Temp **73 C**, Time **10 min**
- Temp **80 C**, Time **5 min**

## Mash step by step

- Heat up **21.3 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **20 min** at **58C**
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **73C**
- Keep mash **5 min** at **80C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                         | Amount        | Yield  | EBC |
|-------|------------------------------|---------------|--------|-----|
| Grain | Monachijski Ciemny Steinbach | 5 kg (70.4%)  | 100 %  | 30  |
| Grain | Biscuit Malt                 | 1 kg (14.1%)  | 79 %   | 50  |
| Grain | Special B Malt               | 0.5 kg (7%)   | 65.2 % | 350 |
| Grain | Kawowy Castle                | 0.6 kg (8.5%) | 79 %   | 480 |

## Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Minstrel | 50 g   | 59 min   | 4.9 %      |
| Boil                | Bohemie  | 50 g   | 25 min   | 7.89 %     |
| Aroma (end of boil) | Angus    | 50 g   | 5 min    | 10.73 %    |
| Dry Hop             | Mosaic   | 50 g   | 7 day(s) | 12 %       |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |

## Extras

| Type   | Name | Amount | Use for | Time   |
|--------|------|--------|---------|--------|
| Fining | mech | 5 g    | Boil    | 10 min |