

# Chocolate Stout

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- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **55**
- SRM **67.2**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.6 liter(s)**
- Total mash volume **32.8 liter(s)**

## Steps

- Temp **58 C**, Time **10 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **24.6 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **40 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount        | Yield | EBC  |
|-------|----------------------------|---------------|-------|------|
| Grain | Weyermann - Pale Ale Malt  | 4 kg (48.8%)  | 85 %  | 7    |
| Grain | Biscuit Malt               | 1 kg (12.2%)  | 79 %  | 45   |
| Grain | Strzegom Czekoladowy 1200  | 1 kg (12.2%)  | 68 %  | 1202 |
| Grain | Weyermann Specjal W        | 0.2 kg (2.4%) | 68 %  | 300  |
| Grain | Strzegom Karmel 600        | 0.2 kg (2.4%) | 68 %  | 601  |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (2.4%) | 68 %  | 400  |
| Grain | Weyermann - Carafa I       | 0.2 kg (2.4%) | 70 %  | 690  |
| Grain | Czekoladowy                | 0.2 kg (2.4%) | 60 %  | 788  |
| Grain | Melanoiden Malt            | 0.2 kg (2.4%) | 80 %  | 39   |
| Grain | Weyermann - Carafa III     | 0.2 kg (2.4%) | 70 %  | 1024 |
| Grain | Płatki owsiane             | 0.4 kg (4.9%) | 85 %  | 3    |

|       |                       |               |      |   |
|-------|-----------------------|---------------|------|---|
| Grain | Jęczmień niesłodowany | 0.4 kg (4.9%) | 75 % | 2 |
|-------|-----------------------|---------------|------|---|

## Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 20 g   | 50 min | 15.5 %     |
| Boil                | Challenger             | 20 g   | 30 min | 7 %        |
| Aroma (end of boil) | Huell Melon            | 50 g   | 10 min | 7.5 %      |
| Aroma (end of boil) | Cluster                | 50 g   | 10 min | 7.75 %     |

## Yeasts

| Name                     | Type | Form   | Amount | Laboratory |
|--------------------------|------|--------|--------|------------|
| WLP004 - Irish Ale Yeast | Ale  | Liquid | 125 ml | White Labs |

## Extras

| Type   | Name                   | Amount | Use for   | Time     |
|--------|------------------------|--------|-----------|----------|
| Flavor | malina liofilizowana   | 50 g   | Primary   | 5 day(s) |
| Flavor | żurawina liofilizowana | 50 g   | Primary   | 5 day(s) |
| Flavor | wiśnie mrożone         | 1600 g | Secondary | 3 day(s) |