

## Beer di Natale ver DE

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **25**
- SRM **28.3**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **3 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **19.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

### Fermentables

| Type    | Name                       | Amount         | Yield  | EBC  |
|---------|----------------------------|----------------|--------|------|
| Grain   | Pale Malt (Maris Otter) UK | 5 kg (74%)     | 80.3 % | 5.3  |
| Grain   | Aromatic Malt Belgian      | 0.5 kg (7.4%)  | 78 %   | 100  |
| Grain   | Crystal Malt UK            | 0.5 kg (7.4%)  | 72 %   | 90   |
| Grain   | Carawheat                  | 0.19 kg (2.8%) | 77 %   | 125  |
| Grain   | Pszeniczny Czekoladowy     | 0.1 kg (1.5%)  | 73 %   | 1001 |
| Grain   | Jęczmień palony            | 0.3 kg (4.4%)  | 55 %   | 985  |
| Adjunct | Oat Flakes                 | 0.17 kg (2.5%) | 80 %   | 5    |

### Hops

| Use for | Name            | Amount | Time   | Alpha acid |
|---------|-----------------|--------|--------|------------|
| Boil    | Northern Brewer | 25 g   | 60 min | 9 %        |
| Boil    | Tettnang        | 25 g   | 15 min | 4 %        |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|              |     |     |      |           |
|--------------|-----|-----|------|-----------|
| Safbrew T-58 | Ale | Dry | 11 g | Fermentis |
|--------------|-----|-----|------|-----------|

### Extras

| Type   | Name                           | Amount | Use for | Time   |
|--------|--------------------------------|--------|---------|--------|
| Flavor | skórka z 2 pomarańczy          | 0 g    | Boil    | 15 min |
| Spice  | goździki 5szt.                 | 0 g    | Boil    | 15 min |
| Spice  | imbir świeży drobno starty     | 50 g   | Boil    | 15 min |
| Spice  | kardamon - pół łyż.            | 0 g    | Boil    | 15 min |
| Spice  | cynamon - 1 kora               | 0 g    | Boil    | 15 min |
| Spice  | gałka muszkatołowa - pół kulki | 0 g    | Boil    | 15 min |