

## XMAS STOUT (24.5)

- Gravity **17.5 BLG**
- ABV ---
- IBU **37**
- SRM **59.5**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **24.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.7 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **31.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **29.2 liter(s)**

### Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **21.9 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Strzegom Pale Ale           | 4.5 kg (57%)   | 79 %   | 6    |
| Grain | Strzegom Karmel 150         | 1.1 kg (13.9%) | 75 %   | 150  |
| Grain | Żytni                       | 0.5 kg (6.3%)  | 85 %   | 8    |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (6.3%)  | 68 %   | 1200 |
| Grain | Płatki owsiane              | 0.4 kg (5.1%)  | 85 %   | 3    |
| Grain | Jęczmień palony             | 0.3 kg (3.8%)  | 55 %   | 985  |
| Sugar | Milk Sugar (Lactose)        | 0.6 kg (7.6%)  | 76.1 % | 0    |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 30 g   | 60 min | 10 %       |
| Boil    | Perle   | 30 g   | 30 min | 7 %        |

### Yeasts

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

|             |     |       |        |        |
|-------------|-----|-------|--------|--------|
| Safale S-04 | Ale | Slant | 200 ml | Safale |
|-------------|-----|-------|--------|--------|

### Extras

| Type  | Name     | Amount | Use for | Time   |
|-------|----------|--------|---------|--------|
| Spice | Cynamon  | 20 g   | Boil    | 15 min |
| Spice | Goździki | 10 g   | Boil    | 15 min |
| Spice | Kardamon | 5 g    | Boil    | 15 min |
| Spice | Curacao  | 20 g   | Boil    | 10 min |