

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 |