

## #10. X-mas stout

---

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **41**
- SRM **35.4**
- Style **Christmas/Winter Specialty Spiced Beer**

### 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 **3.5 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.3 liter(s)**

### Steps

- Temp **65 C**, Time **45 min**
- Temp **68 C**, Time **25 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **21.2 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **25 min** at **68C**
- Keep mash **1 min** at **76C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type           | Name                            | Amount          | Yield | EBC  |
|----------------|---------------------------------|-----------------|-------|------|
| Grain          | Malteurop ale                   | 3.81 kg (54.8%) | 80 %  | 5    |
| Grain          | Strzegom Karmel 150             | 0.63 kg (9.1%)  | 75 %  | 150  |
| Grain          | Strzegom Czekoladowy ciemny     | 0.25 kg (3.6%)  | 68 %  | 1200 |
| Grain          | Carafa II                       | 0.25 kg (3.6%)  | 70 %  | 812  |
| Grain          | Carafa III                      | 0.25 kg (3.6%)  | 70 %  | 1034 |
| Grain          | Strzegom Monachijski typ I      | 0.63 kg (9.1%)  | 79 %  | 16   |
| Liquid Extract | Miód Gryczany (Buckwheat Honey) | 0.88 kg (12.7%) | 70 %  | 40   |
| Grain          | Pszeniczny                      | 0.25 kg (3.6%)  | 85 %  | 4    |

### Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil                | Magnum | 15 g   | 60 min | 14 %       |
| Boil                | Magnum | 10 g   | 45 min | 14 %       |
| Boil                | Magnum | 10 g   | 30 min | 14 %       |
| Aroma (end of boil) | Magnum | 5 g    | 15 min | 14 %       |

|                     |        |     |       |      |
|---------------------|--------|-----|-------|------|
| Aroma (end of boil) | Magnum | 5 g | 5 min | 14 % |
| Whirlpool           | Magnum | 5 g | 0 min | 14 % |

## Yeasts

| Name                      | Type | Form  | Amount   | Laboratory       |
|---------------------------|------|-------|----------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Slant | 137.5 ml | Fermentum Mobile |

## Extras

| Type   | Name                  | Amount  | Use for | Time   |
|--------|-----------------------|---------|---------|--------|
| Spice  | Skórka z 4 pomarańczy | 0 g     | Boil    | 15 min |
| Flavor | Laktoza               | 562.5 g | Boil    | 15 min |
| Spice  | Imbir                 | 10 g    | Boil    | 15 min |
| Spice  | Goździki              | 10 g    | Boil    | 15 min |
| Spice  | Cynamon 3szt          | 15 g    | Boil    | 15 min |
| Spice  | Kardamon              | 7 g     | Boil    | 15 min |

## Notes

- Przed dodaniem laktozy - 14 Blg  
Po dodaniu laktozy - 16 Blg  
*Oct 24, 2017, 5:45 AM*