

48. Żytni stout

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **48**
- SRM **38**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.2 liter(s)**

Steps

- Temp **40 C**, Time **15 min**
- Temp **62 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **12.6 liter(s)** of strike water to **42.9C**
- Add grains
- Keep mash **15 min** at **40C**
- Keep mash **60 min** at **62C**
- Keep mash **2 min** at **78C**
- Sparge using **4.2 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------|-----------------|--------|------|
| Grain | Viking Pale Ale malt | 1.25 kg (34.7%) | 80 % | 5 |
| Grain | Żytni | 1.8 kg (50%) | 85 % | 8 |
| Grain | Special B Malt | 0.2 kg (5.6%) | 65.2 % | 315 |
| Grain | Weyermann - Dehusked Carafa III | 0.1 kg (2.8%) | 70 % | 1024 |
| Grain | Chocolate Malt (UK) | 0.25 kg (6.9%) | 73 % | 887 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---|--------|--------|------------|
| Boil | Magnum własna szyszka 2017, 1/3 więcej niż granulatu. | 20 g | 60 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|------|-------|--------|------------|
| WLP Burlington- | Ale | Slant | 70 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|-------|------|------|-------|
| Flavor | Kakao | 20 g | Boil | 5 min |
|--------|-------|------|------|-------|