

X - Brown Porter - 41

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **33**
- SRM **19.8**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **75 C**, Time **1 min**
- Temp **100 C**, Time **60 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **75C**
- Keep mash **60 min** at **100C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 3 kg (56.6%) | 80 % | 5 |
| Grain | Pilzński | 1 kg (18.9%) | 81 % | 4 |
| Grain | Strzegom Bursztynowy | 0.5 kg (9.4%) | 70 % | 49 |
| Grain | Brown Malt (British Chocolate) | 0.5 kg (9.4%) | 70 % | 128 |
| Grain | Strzegom Czekoladowy ciemny | 0.15 kg (2.8%) | 68 % | 1200 |
| Grain | Strzegom Karmel 150 | 0.15 kg (2.8%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Marynka | 15 g | 60 min | 10 % |
| Boil | East Kent Goldings | 20 g | 50 min | 5.1 % |
| Aroma (end of boil) | East Kent Goldings | 30 g | 10 min | 5.1 % |

Yeasts

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

| | | | | |
|-----------------------|-----|--------|----------|-------------|
| Wyeast - American Ale | Ale | Liquid | 0.125 ml | Wyeast Labs |
|-----------------------|-----|--------|----------|-------------|