

# Pumpnickel Porter II

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **29**
- SRM **22.6**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **19.8 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **15.4 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **60 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

| Type    | Name               | Amount        | Yield | EBC  |
|---------|--------------------|---------------|-------|------|
| Grain   | Pilsner Malz Best  | 3 kg (55.6%)  | 81 %  | 3    |
| Grain   | Roggenmalz         | 0.5 kg (9.3%) | 84 %  | 2    |
| Grain   | Caraamber          | 0.2 kg (3.7%) | 75 %  | 70   |
| Grain   | Caramunich II Best | 0.2 kg (3.7%) | 73 %  | 120  |
| Grain   | Caraaroma          | 0.2 kg (3.7%) | 78 %  | 400  |
| Grain   | Chocolate Best     | 0.1 kg (1.9%) | 75 %  | 900  |
| Grain   | Carafa II Best     | 0.1 kg (1.9%) | 65 %  | 1100 |
| Grain   | Rauch Malz Best    | 0.1 kg (1.9%) | 77 %  | 6    |
| Adjunct | Pumpnickel         | 1 kg (18.5%)  | --- % | 50   |

## Hops

| Use for             | Name               | Amount | Time   | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil                | East Kent Goldings | 30 g   | 60 min | 5.7 %      |
| Boil                | East Kent Goldings | 30 g   | 15 min | 5.7 %      |
| Aroma (end of boil) | East Kent Goldings | 30 g   | 5 min  | 5.7 %      |