

# Black Express

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **33**
- SRM **37.6**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **7 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.2 liter(s)**

## Fermentables

| Type  | Name                             | Amount         | Yield  | EBC  |
|-------|----------------------------------|----------------|--------|------|
| Grain | Viking Pale Ale malt             | 3.5 kg (62.5%) | 80 %   | 5    |
| Grain | Strzegom Monachijski typ II      | 0.5 kg (8.9%)  | 79 %   | 22   |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.4 kg (7.1%)  | 73 %   | 1001 |
| Grain | Castle Cafe                      | 0.4 kg (7.1%)  | 75.5 % | 250  |
| Grain | Carafa III                       | 0.2 kg (3.6%)  | 70 %   | 1034 |
| Grain | Jęczmień palony                  | 0.15 kg (2.7%) | 55 %   | 985  |
| Grain | Płatki owsiane                   | 0.4 kg (7.1%)  | 60 %   | 3    |
| Sugar | cukier                           | 0.05 kg (0.9%) | 100 %  | 0    |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Magnum            | 25 g   | 45 min | 13.5 %     |
| Aroma (end of boil) | Lublin (Lubelski) | 25 g   | 5 min  | 4 %        |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |

## Extras

| Type   | Name     | Amount | Use for  | Time |
|--------|----------|--------|----------|------|
| Flavor | Espresso | 250 g  | Bottling | ---  |