

## Black Polish Apa

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **34**
- SRM **41.6**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.5 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Fermentables

| Type  | Name                         | Amount         | Yield | EBC  |
|-------|------------------------------|----------------|-------|------|
| Grain | Mep©Pilsner                  | 4.5 kg (84.9%) | 80 %  | 4    |
| Grain | Palone ziarno jęczmienia     | 0.2 kg (3.8%)  | 65 %  | 1150 |
| Grain | Słód Carafa® Special typ III | 0.2 kg (3.8%)  | 65 %  | 1400 |
| Grain | Słód Czekoladowy             | 0.4 kg (7.5%)  | 68 %  | 1200 |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Lublin (Lubelski) | 100 g  | 15 min | 3 %        |
| Boil    | Sybilla           | 50 g   | 15 min | 7.5 %      |

### Yeasts

| Name            | Type | Form  | Amount | Laboratory |
|-----------------|------|-------|--------|------------|
| fermentis US-05 | Ale  | Slant | 100 ml | ---        |