

Rye Black IPA

- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **78**
- SRM **41.1**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **35.2 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|-----------------|-------|------|
| Grain | Pilzneński | 4 kg (45.5%) | 81 % | 4 |
| Grain | Rye Malt | 3.55 kg (40.3%) | 63 % | 10 |
| Grain | Carafa III | 0.25 kg (2.8%) | 70 % | 1034 |
| Grain | Biscuit Malt | 0.5 kg (5.7%) | 79 % | 50 |
| Grain | Briess - Dark Chocolate Malt | 0.5 kg (5.7%) | 60 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------------|--------|----------|------------|
| Boil | Warrior | 25 g | 60 min | 15.5 % |
| Boil | Warrior | 25 g | 40 min | 15.5 % |
| Boil | Warrior | 10 g | 20 min | 15.5 % |
| Boil | Warrior | 20 g | 10 min | 15.5 % |
| Whirlpool | Rakau (NZ) | 40 g | 0 min | 9.5 % |
| Dry Hop | Rakau (NZ) | 60 g | 2 day(s) | 9.5 % |
| Dry Hop | Nelson Sauvín | 50 g | 2 day(s) | 11 % |
| Dry Hop | Warrior | 20 g | 2 day(s) | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| K-97 | Ale | Dry | 23 g | --- |