

BLACK IPA RYZOWA

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **44**
- SRM **28**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **38.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **48.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **32.4 liter(s)**
- Total mash volume **43.2 liter(s)**

Steps

- Temp **40 C**, Time **20 min**
- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **60 min**
- Temp **70 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **32.4 liter(s)** of strike water to **43.3C**
- Add grains
- Keep mash **20 min** at **40C**
- Keep mash **20 min** at **50C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **70C**
- Keep mash **0 min** at **78C**
- Sparge using **26.6 liter(s)** of **76C** water or to achieve **48.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|---------------|-------|------|
| Grain | Viking Pilsner malt | 6 kg (55.6%) | 82 % | 4 |
| Grain | Pszeniczny | 3 kg (27.8%) | 85 % | 4 |
| Grain | Płatki ryzowe | 1 kg (9.3%) | 85 % | 3 |
| Grain | Strzegom pszenica prażona | 0.3 kg (2.8%) | 70 % | 1000 |
| Grain | Strzegom Barwiący | 0.5 kg (4.6%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------------------|--------|--------|------------|
| Boil | Simcoe | 50 g | 60 min | 13.2 % |
| Boil | Simcoe | 30 g | 10 min | 13.2 % |
| Boil | Cascade PL | 10 g | 10 min | 5.5 % |
| Aroma (end of boil) | Cascade PL | 10 g | 0 min | 5.5 % |
| Aroma (end of boil) | Simcoe | 20 g | 0 min | 13.2 % |
| Aroma (end of boil) | Styrian Dragon (SLO) | 45 g | 0 min | 7.2 % |

| | | | | |
|---------|----------------------|------|----------|--------|
| Dry Hop | Mosaic | 30 g | 3 day(s) | 11.8 % |
| Dry Hop | Simcoe | 30 g | 3 day(s) | 13.2 % |
| Dry Hop | Styrian Dragon (SLO) | 30 g | 3 day(s) | 7.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 10 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|-------|
| Water Agent | gips piwowarski | 10 g | Boil | 0 min |
| Water Agent | nacl | 4 g | Boil | 0 min |