

Black IPA

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **52**
- SRM **35.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.9 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25.3 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **76.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|-------------------------------------|---------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 5 kg (72.5%) | 85 % | 7 |
| Grain | Weyermann - Carapils | 0.5 kg (7.2%) | 78 % | 4 |
| Grain | Cara Crystal Castle Malting 150 EBC | 0.5 kg (7.2%) | 78 % | 150 |
| Grain | Carafa III 1300-1500 EBC | 0.5 kg (7.2%) | 70 % | 1400 |
| Adjunct | płatki jęczmienne | 0.4 kg (5.8%) | 70 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil | Centennial | 30 g | 60 min | 10.5 % |
| Aroma (end of boil) | Citra | 30 g | 15 min | 12 % |
| Whirlpool | Amarillo | 30 g | 30 min | 9.5 % |
| Dry Hop | Citra | 60 g | 3 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-----------------------------|-----|--------|-------|------------------|
| FM54 Gorączka kalifornijska | Ale | Liquid | 30 ml | Fermentum Mobile |
|-----------------------------|-----|--------|-------|------------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------------|---------------------------|--------|----------|--------|
| Water Agent | kwas mlekowy | 1 g | Boil | 1 min |
| Fining | mech irlandzki | 5 g | Boil | 10 min |
| Fining | kwask askorbinowy - wit.C | 4 g | Bottling | --- |

Notes

- 22 litry brzezki nastawnej burzliwa 15 dni (ok 20 st.C)
cicha 15 dni (ok 20 st.C)
16,5blg początkowe / (FFT=5,2blg) /5,0 końcowe (inny balingomierz)
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- https://drive.google.com/open?id=1zGvKrJ3Cr4vhgXwF0zl5_Av9CMYIBDwT
<https://drive.google.com/open?id=1HZP1c6tv9-SINCXpC3IMUfLXkrQiLO3P>
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