

magdag 2

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **40**
- SRM **19.4**
- Style **Brown IPA**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **19.7 liter(s)**

Mash information

- Mash efficiency **74 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **20.2 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **75 C**, Time **40 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **75C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **19.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2 kg (34.7%) | 80 % | 5 |
| Grain | Viking Munich Malt | 1.2 kg (20.8%) | 78 % | 18 |
| Grain | Karmelowy Jasny 30EBC | 1.02 kg (17.7%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 1.15 kg (19.9%) | 75 % | 150 |
| Grain | enzymatyczny | 0.2 kg (3.5%) | 80 % | 5 |
| Grain | Weyermann - Acidulated Malt | 0.2 kg (3.5%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Marynka | 25 g | 30 min | 8 % |
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| Aroma (end of boil) | Crystal | 100 g | 2 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Slant | 250 ml | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|--------|------------|--------|---------|--------|
| Fining | whirlflock | 1 g | Boil | 10 min |