

## Wee-Heavy (K)

- Gravity **25.3 BLG**
- ABV **11.8 %**
- IBU **34**
- SRM **23.3**
- Style **Strong Scotch Ale**

### Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **19.1 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4.1 liter(s)** of **76C** water or to achieve **19.1 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount        | Yield | EBC |
|-------|----------------------------------|---------------|-------|-----|
| Grain | Simpsons - Maris Otter           | 6 kg (80%)    | 81 %  | 6   |
| Grain | Weyermann - Caraaroma            | 0.2 kg (2.7%) | 78 %  | 400 |
| Grain | Słód Caramunich Typ II Weyermann | 0.4 kg (5.3%) | 73 %  | 120 |
| Grain | Weyermann - Carahell             | 0.2 kg (2.7%) | 77 %  | 26  |
| Grain | Strzegom Czekoladowy jasny       | 0.2 kg (2.7%) | 68 %  | 400 |
| Grain | Monachijski Ciemny Bestmalz      | 0.5 kg (6.7%) | 100 % | 28  |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Challenger | 50 g   | 60 min | 7 %        |

### Yeasts

| Name | Type | Form  | Amount | Laboratory |
|------|------|-------|--------|------------|
| Espe | Ale  | Slant | 50 ml  | PRIV       |

## Extras

| Type                                    | Name               | Amount | Use for | Time   |
|-----------------------------------------|--------------------|--------|---------|--------|
| Fining                                  | Whirlfloc          | 1.25 g | Boil    | 5 min  |
| Water Agent                             | Sól Epsom          | 1 g    | Mash    | 95 min |
| Water Agent                             | Chlorek wapnia     | 2.3 g  | Mash    | 95 min |
| 2.3 to przeliczona wartość w ml dla 1 g |                    |        |         |        |
| Water Agent                             | Kwas fosforowy 75% | 3 g    | Mash    | 95 min |

## Notes

- Woda - 50% demineralizowana + 50% kranowa  
Woda jaka powinna być:  
Calcium (ppm)50-100  
Magnesium (ppm)0-30  
Alkalinity as CaCO<sub>3</sub>40-120  
Sulfate (ppm)50-100  
Chloride (ppm)50-150  
Sodium (ppm)<100  
Residual Alkalinity0-60

Po dodaniu soli i wody zdemineralizowanej  
Calcium (ppm)67  
Magnesium (ppm)10  
Alkalinity as CaCO<sub>3</sub>78  
Sulfate (ppm)93  
Chloride (ppm)81  
Sodium (ppm)26  
Residual Alkalinity24  
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