

Blackout

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **21**
- SRM **32.9**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **24.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.2 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **16.7 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **40 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------------|----------------|-------|------|
| Grain | Pale Ale - Crisp | 4.2 kg (75.5%) | 82 % | 4.5 |
| Grain | Owsiany - Viking Malt | 0.5 kg (9%) | 80 % | 5 |
| Grain | Caraaroma - Weyermann | 0.2 kg (3.6%) | 82 % | 350 |
| Grain | Dekstrynowy - Viking Malt | 0.16 kg (2.9%) | 79 % | 14 |
| Grain | Carafa II Special - Weyermann | 0.25 kg (4.5%) | 80 % | 1100 |
| Grain | Czekoladowy Pszeniczny - Weyermann | 0.25 kg (4.5%) | 80 % | 1000 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 22 g | 60 min | 9.1 % |

Yeasts

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

| | | | | |
|---------------------------|-----|-------|--------|------------|
| WLP013 - London Ale Yeast | Ale | Slant | 300 ml | White Labs |
|---------------------------|-----|-------|--------|------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------|---------|--------|---------|--------|
| Other | Laktoza | 0.65 g | Boil | 15 min |