

Tonka stout

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **31**
- SRM **26.5**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.9 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **19.9 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **9.9 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 4 kg (70.2%) | 85 % | 7 |
| Grain | Strzegom Karmel 600 | 0.3 kg (5.3%) | 68 % | 601 |
| Grain | Strzegom Czekoladowy 400 | 0.4 kg (7%) | 68 % | 400 |
| Grain | Jęczmień palony | 0.1 kg (1.8%) | 55 % | 985 |
| Grain | płatki jęczmienne | 0.4 kg (7%) | 60 % | 4 |
| Grain | monachijski barke | 0.5 kg (8.8%) | 78 % | 21 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 40 g | 15 min | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 500 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------|--------|-----------|----------|
| Flavor | tonka | 50 g | Secondary | 5 day(s) |