# Rules for integrands of the form $(c + d\,x)^m\,(a + b\,Sech[e + f\,x])^n$

**N:** $\int u^m\,Sech[v]^n\,dx$ when $u == c + d\,x\;\bigwedge\;v == a + b\,x$

- **Derivation: Algebraic normalization**

- **Rule: If** $u == c + d\,x\;\wedge\;v == a + b\,x$**, then**

$$\int u^m\,Sech[v]^n\,dx\;\longrightarrow\;\int (c + d\,x)^m\,Sech[a + b\,x]^n\,dx$$

- **Program code:**

```
Int[u_^m_.*Sech[v_]^n_.,x_Symbol] :=
   Int[ExpandToSum[u,x]^m*Sech[ExpandToSum[v,x]]^n,x] /;
FreeQ[{m,n},x] && LinearQ[{u,v},x] && Not[LinearMatchQ[{u,v},x]]
```

```
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   Int[ExpandToSum[u,x]^m*Csch[ExpandToSum[v,x]]^n,x] /;
FreeQ[{m,n},x] && LinearQ[{u,v},x] && Not[LinearMatchQ[{u,v},x]]
```