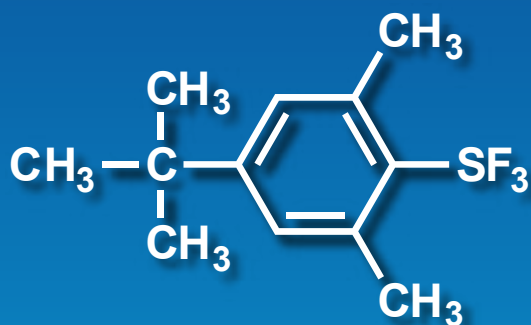


# Stable Fluorinating Reagent with Ease of Handling FLUOLEAD®



## Advantages

- Thermally Stable
- Easy to Handle
- Widely Applicable to Various Substrates

FLUOLEAD®

1g / 5g / 25g

[B3664]

4-*tert*-Butyl-2,6-dimethylphenylsulfur Trifluoride (FLUOLEAD®) [B3664], which was first reported by Umemoto, is a novel nucleophilic fluorinating reagent. Differing from other existing fluorinating reagents, such as DAST, B3664 is a crystalline solid with high thermal stability, which makes it easier to handle. B3664 fluorinates a variety of substrates to afford the corresponding fluorinated compounds in good yields.

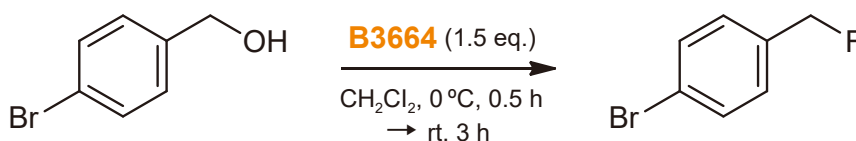
## Application

### Nucleophilic Fluorinating Reagent

- |          |   |                   |  |   |   |
|----------|---|-------------------|--|---|---|
| • R-OH   | → | R-F               | • R-CHO                                | → | R-CF <sub>2</sub> H                             |
| • R-COOH | → | R-CF <sub>3</sub> | • R <sup>1</sup> -C(=S)-R <sup>2</sup> | → | R <sup>1</sup> -CF <sub>2</sub> -R <sup>2</sup> |

## Example 1

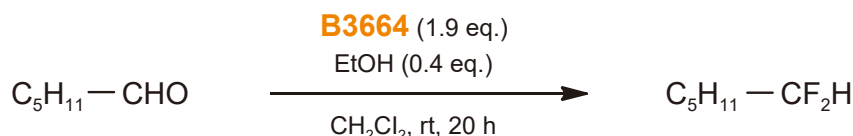
### Fluorination of Alcohols<sup>1)</sup>



# Stable Fluorinating Reagent with Ease of Handling: FLUOLEAD®

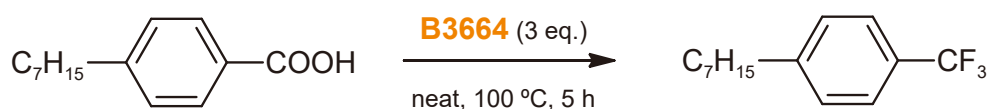
## Example 2

### Fluorination of Aldehydes<sup>1)</sup>



## Example 3

### Direct Conversion of Carboxyl Group to Trifluoromethyl Group<sup>1)</sup>



## References

- 1) T. Umemoto, R. P. Singh, Y. Xu, N. Saito, *J. Am. Chem. Soc.* **2010**, 132, 18199. <https://doi.org/10.1021/ja106343h>
- 2) T. Umemoto, *EROS* **2013**. <https://doi.org/10.1002/047084289X.rn01524>

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TCI fluorination



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